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CANNER PACKER

JUNE 1959

CANNED • DRY • FROZEN • GLASS

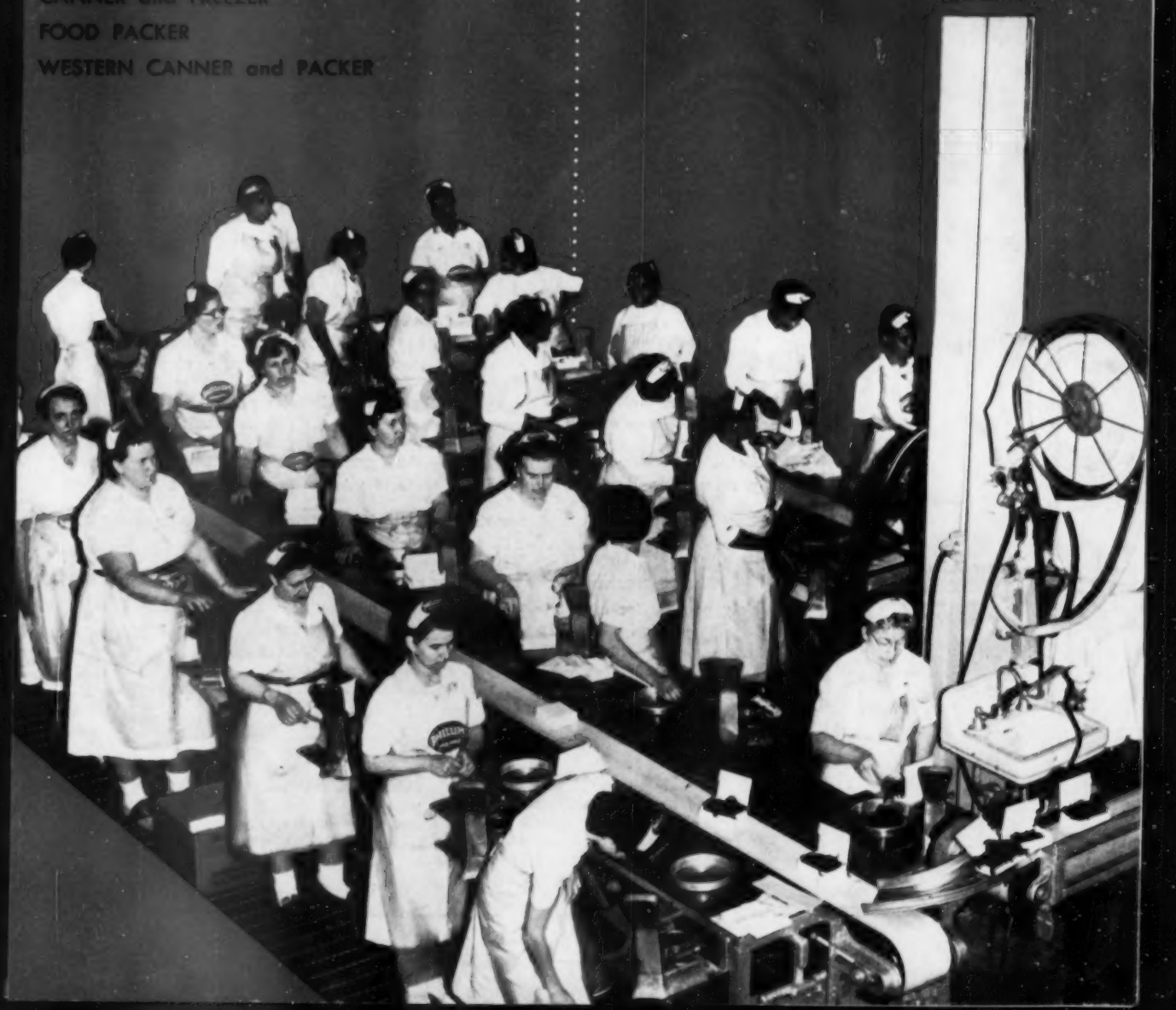
a consolidation of:

CANNER and FREEZER
FOOD PACKER
WESTERN CANNER and PACKER

Consumers prefer canned fruits that are sweeter and more tart 40

Midwest mayonnaise packer doubles shelf life by using new, tight closure 38

East Coast canner reshapes sales and production staff (Cover) 30



NEW FROM ROCHE

WATER-DISPERSIBLE DRY BETA CAROTENE BEADLETS (TYPE 2.4-S)

On addition
WATER-DISPERSIBLE

after 10 seconds
WATER-DISPERSIBLE

after 45 seconds
WATER-DISPERSIBLE

BETTER Selling Looking Colored LIQUID FOODS

with New *Dry* Safe

Beta Carotene Beadlets

(Type 2.4-S, Water-Dispersible)

1. ***Better, because . . . Water-Dispersible, Fast*** — Roche Dry Beta Carotene Beadlets (Type 2.4-S) are almost instantly dispersible in water and fruit juices (see illustration). A clouded effect similar to that produced by fruit insolubles is contributed. The bland-tasting beadlets have good stability.

2. ***Better, because . . . Edible, Free-Flowing Beadlets*** — Tiny droplets of beta carotene are enclosed in dry, edible, free-flowing, water-dispersible Beadlets. They standardize the color of such foods as:

- Fruit juices
- Fruit drinks
- Juice concentrates
- Mellorine
- Baked goods
- Cheese
- Eggnog
- Gelatin desserts
- Dessert toppings
- Puddings
- Confections
- Egg yolk products
- Creamed foods
- Soups
- Other foods having a water base

3. ***Better, because . . . Absolutely Safe*** — Beta carotene Roche is the pure, man-made "duplicate" of the product which nature has widely distributed in the vegetable foods we human beings have been eating for thousands of years.

4. ***Better, because . . . Colors Easily Standardized*** — Color is easily standardized from yellow to orange depending on the amount of the Beadlets used.

5. ***Better, because . . . Vitamin-A-Potent*** — Each gram of the Type 2.4-S Beadlets provides approximately 40,000 U.S.P. units of vitamin A activity.

6. ***Better, because . . . Mesh Sizes Varied*** — The Roche beadlet particles represent a combination of commercial 30 to 80 mesh material.

OTHER FORMS OF ROCHE BETA CAROTENE PRODUCTS IN VEGETABLE OIL

Widely popular for use in certain oil-base foods, these are: 30% Beta Carotene Liquid Suspension • 24% Beta Carotene Semi-Solid Suspension • Blends of Beta Carotene and Vitamin A • Blends of Beta Carotene to specified dilutions.

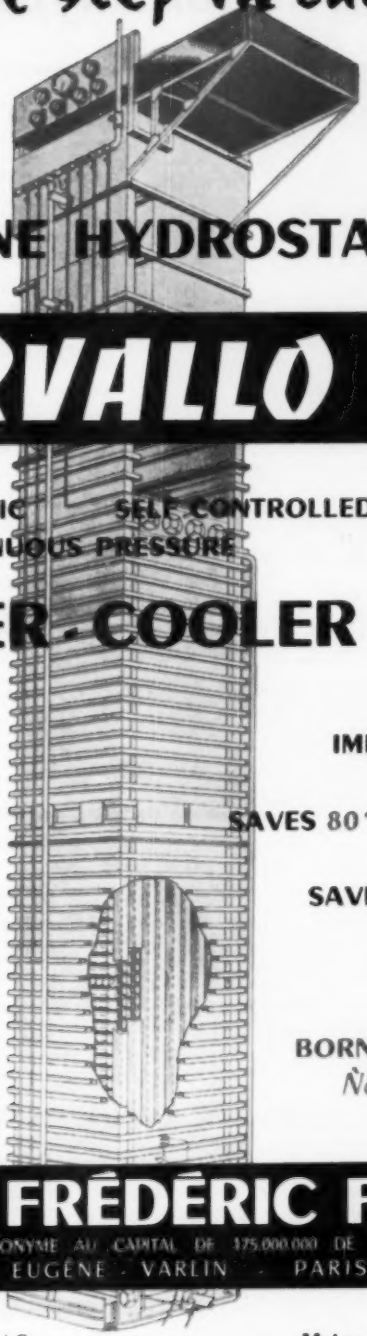
Ask your Roche salesman or write to the Vitamin Division for free samples.

VITAMINS COME *RIGHT* FROM ROCHE

VITAMIN DIVISION • HOFFMANN-LA ROCHE INC. • Nutley 10, N. J.

Pacific Coast distributor: L. H. Butcher Co., San Francisco • Los Angeles • Seattle • Salt Lake City Portland. *In Canada:* Hoffmann-La Roche Ltd., 1936 Bourdon Street, St. Laurent, Montreal 9, P. Q.

a sensational step in canning



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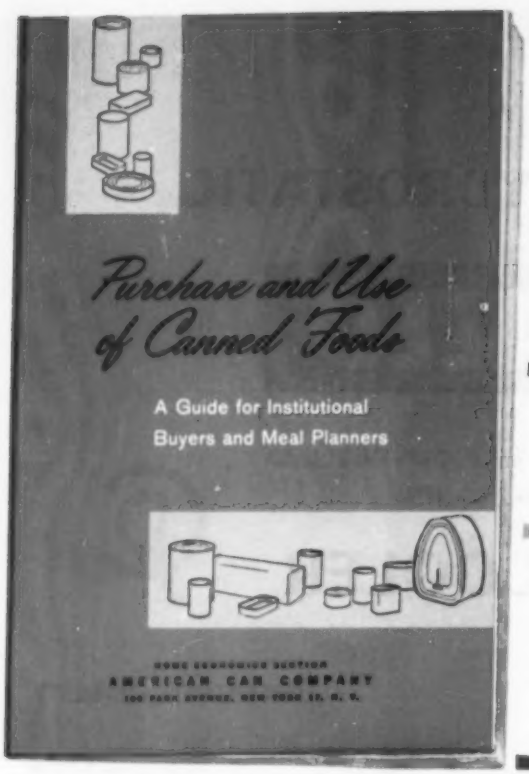
FRANCE

Canco promotes canned food sales to institutional buyers!

HERE'S WHAT THEY'RE SAYING ABOUT THIS BOOK...



"A wonderful book and just what the industry needs."

"Has a definite place in any salesman's bag."

"Finest thing ever written as a guide for institutional buyers and meal planners."

"More information per square inch than anything we could conceive of creating ourselves."

"We certainly believe you are doing a great service toward better understanding as to usage and preparation of canned foods."

"We have found your book, 'The Purchase and Use of Canned Foods', of great benefit to our sales force. This book has been of considerable assistance in the selling of canned merchandise."

"Congratulations on this fine booklet. I am sure that the dieticians and meal planners of the many hotels, restaurants and institutions, which we supply, would find it a great addition to their fund of information to help them intelligently plan their requirements."

Ever since its publication, Canco's *Purchase and Use of Canned Foods* has been constantly in demand. Over 75,000 requests have been filled, and Canco answers more every day.

Institutional food buyers and meal planners find it invaluable. Many canned food salesmen incorporate the book in their sales story. It supplies many convincing reasons for increasing canned food purchases.

The preparation and distribution of this successful book is another example of Canco's unsurpassed service to canners.

CANCO Division AMERICAN CAN COMPANY

New York • Chicago
New Orleans • San Francisco

CANNER PACKER

volume 128, number 6 JUNE 1959

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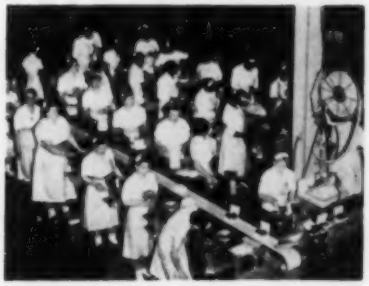

COVER PICTURE: Packing and check-weighing spinach, prior to freezing, in one of the plants of Coastal Foods Co., Maryland. Coastal was created by the merger of two established Eastern Shore firms—Phillips and Gibbs—when they were acquired by Consolidated Foods Corp. How their production and sales have been built to a high peak of efficiency by a newly-created management team is told in an article beginning on page 30.

FEATURES:

Canner and Packer Field Heads Consider Raw Products Institute 29
Nearly two-thirds of the raw product executives polled by Canner/Packer favor an organization to keep fieldmen informed.

Building a Hard-hitting Management Team 30
Jim Glover has shaped a power selling and production organization at Coastal Foods, Inc., Cambridge, Md.

How Quality Potato Products Are Frozen by Taterstate 32
Harry E. Umphrey's plant at Washburn, Me., turns out frozen French fries and potato puffs from October to June.

General Foods Tests a New Dry-Frozen Baby Food 35
Convenience and nutrition are big sales points in Watertown, N. Y., test market. No official word yet on consumer acceptance.

Canned Food Retorting—Why and How 36
National Canners Association committee on retort equipment and operations reviews requirements for correct processing.

Longer Shelf Life for Mayonnaise 38
New White Cap closure at J. L. Read Foods, Inc., Streator, Ill., speeds up production line and doubles shelf line of mayonnaise.

Sweeter/Tarter Canned Fruits Please Consumers 40
Canned fruit study also shows how improved techniques can increase efficiency some 25%.

How to Tell Quality in a Pickle—and How to Get it 41
Dr. Wilbur A. Gould, technology editor, evaluates present standards for quality in the pickle business.

Grades of Apples for Processing 42
Recommendations for an improved grading system for apples for processing which will benefit both grower and processor.

EDITORIAL: Raw Product Managers—Key to Quality Food Products ... 88
Despite growth of responsibilities, canners' field man often finds his position lacks stature to do what he should.

SPECIAL DEPARTMENTS:

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In the Next Issue: *The strangle-hold that seasonal sales habits have had on the cranberry industry is finally being broken by a year-around sales campaign of the National Cranberry Association. . . New mechanical peach grading system cuts direct labor costs 30%, finds the Washington Cooperative Farmers Association. . . It is the little things such as spinach that needs molybdenum that starts John H. Dulany and Son's quality control program in the field.*

The complete line of Angelus Seamers with their wide range of accessories are adaptable for any type of product in production volume from 30 to 500 cans per minute.

Angelus is the nation's only manufacturer exclusively producing automatic round can closing machines. Every machine is backed by over 45 years of specialized experience.

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CANNER PACKER BUSINESS NEWS LETTER
totally dedicated to serving canned, dry, frozen, glassed food processors

June 1959

Complete statistical data on canned, dry, frozen and glassed foods. . . a directory of equipment and supply manufacturers and a classified index of their products. . .reviews of industry production, marketing, raw products and research. . .and a new industry data department with pages of concentrated but easy-to-use information. . .these are the major departments of the 1959 Yearbook Number which CANNER/PACKER will publish in mid-September. The annual edition, which is designed to serve as an operating and merchandising guide for processed food packers and distributors, is expected to total several hundred pages in size.

A considerable gain in the output of French fried potatoes, and the first segregation of strawberries into sliced and whole, are significant items in the Natl. Assn. of Frozen Food Packers 1958 report on U.S. frozen food production. Well over two-thirds of the strawberries were packed sliced, the figures published in Canner/Packer show. Over-all production of frozen fruits dropped slightly from 1957, while vegetables showed a small gain.

Cooperative merchandising by cooperatives is a relatively new development in the processed food business. National Cranberry Assn. and Knouse Foods Cooperative have joined in producing an apple-cranberry sauce, marketed under the latter's label but with the former's brand also show. Sunsweet Growers and Sun Maid Raisin Growers recently carried a joint two-page spread in national consumer media, featuring prunes and raisins.

Automatic cheese-making process has been developed and is in use in a New York plant of Dairyman's League Cooperative, Inc., called Ched-O-Matic, the equipment consists of rotary cylinders perforated with thousands of small holes, just big enough to allow whey to pass through for removal, but just small enough to retain the curd.

Baby bread is the newest development in infant foods. Dan Gerber, president of Gerber Products Co., Fremont, Mich., and R. Arnold Jackson, president of Ward Baking Co., New York, have undertaken jointly to develop a bread to meet the special nutritional needs of babies and young children up to 6 years of age. The new product will be made by Ward in areas east of the Mississippi, and will be franchised to other bakers in the western states. It will be marketed under the name "Gerber's Primary Bread." Three years of research lie behind the new food.

Plans for giant new food plants are being announced daily. I. J. Grass Noodle Co. of Chicago will build a $500,000 factory. Completion by January 1, 1960, estimated. Corn Products Co. will spend $28 million for world-wide expansion, modernization and replacement of facilities in 1959, President William T. Brady told stockholders, last month. Plant enlargement costing $1 million will be undertaken in 1959 by R. T. French Co. at Shelley, Idaho plant. Kal Kan Foods will build a $125,000 administration building in Los Angeles this summer. Star-Kist Foods, Inc. will build three new buildings for its Puerto Rico facilities. In one will be processing equipment for a 5,000-cases-a-day volume; in another cold storage for 2,000 tons of tuna at -5°; and in the third, can-forming equipment. New plant for Salada-Shirriff-Horsey flake potatoes will be built at Alliston, Ontario, at a cost of around $500,000.

TWIST CAP

QUALITY CONTROL

AT ANCHOR HOCKING MEANS PRODUCTION EFFICIENCY FOR YOU!

Test after test after test! From the selection of all raw materials used in the manufacture of Anchorglass® containers and Anchor® closures to the final production line inspection, Anchor Hocking employs literally hundreds of exacting controls, tests and checks daily. All this control work, involving highly trained chemists, bacteriologists, engineers, other technicians and personnel, is done but for one reason. And that is, to provide you with uniform, high quality glass containers and closures that will give you high-speed production and dependable protection for your products. So contact an Anchor Man now. Anchor Hocking Glass Corporation, Lancaster, Ohio.

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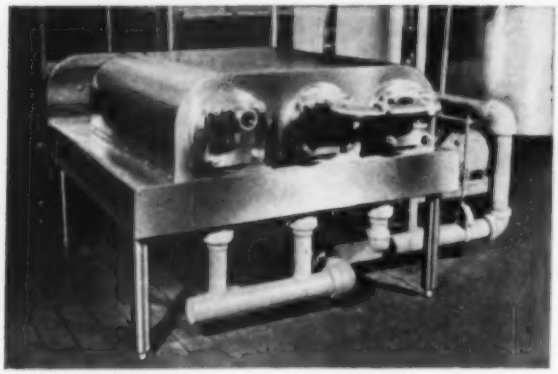
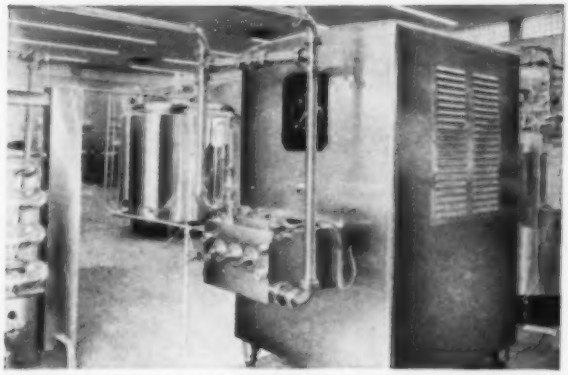
Put an Anchor Man on your team

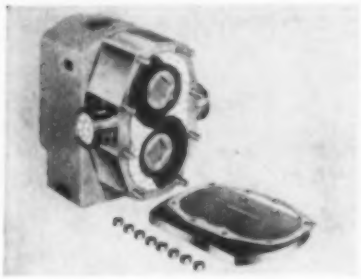
SIX Creamery Package Products Job-Proved for More Profitable Processing



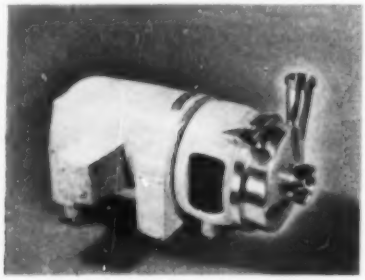
SWEPT-SURFACE® HEATER and COOLER provides extremely economical continuous heating and cooling of liquids and semi-solids; — 30° F. to 300° F. Blades constantly sweeping product from heat transfer surface eliminate burn-on during heating, increase product yield. Ideal for heavy bodied products and pastes. Bulletin E-1300.



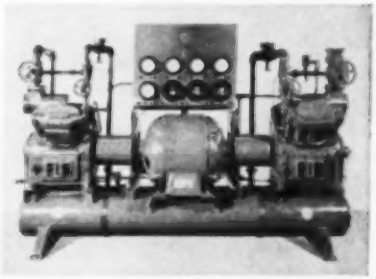
HIGH EFFICIENCY HOMOGENIZERS—Completely redesigned for smoother, more efficient homogenization at much lower pressure than others. Reduces power costs and parts wear. Single service valve gives "new" performance every day. Complete line, including high capacity 5-cyl. models. Bulletin N-1292.



STAINLESS ROTARY FOOD PUMP
New single-lobe, resilient rotors are especially designed for pumping food products having distinct food particles up to ¾" size, such as vegetable stews and mixes, fruits in simple syrups, cottage cheese, etc. Flow is continuous, positive, non-agitating. Supplement 3, Bulletin H-1290.



CENTRIFUGAL SANITARY PUMPS
Stainless steel. Complete size and capacity range matches pump to job—saves money and operating cost. Built to reduce maintenance. Fast cleaning and quick disassembly without tools. Pumps both product and cleaning solutions. Bulletin H-1200.



2-STAGE AMMONIA COMPRESSOR UNITS
Provide automatic day-and-night low temperature refrigeration for hardening rooms, frozen products, etc. Use 25% to 50% less connected horsepower than for single stage, save wear and operating problems. Package design saves space. Two types and capacity ranges. Shown, Type "K." Bulletin V-1211.

CRESCENT PLATE HEAT EXCHANGERS
Stainless steel. Can be continuous heater, cooler, regenerator, H.T.S.T. pasteurizer — or all four. Reduce gasket maintenance to less than half, yet every plate is a heat exchanger. Compact design saves space, easy cleaning saves wash-up time. Meet U.S.P.H. standards. Bulletin E-1153.

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Make sure the housewife reaches for *your* package. Let Muirson's label experts capture the full appeal of your product—then *protect* those appetizing colors all the way to the grocer's shelf. Tuff-Coat does it! This exclusive Muirson finish *positively* resists scuffing, heat blocking, moisture vapor transmission. It's the perfect finish for dried fruit wraps. Worth investigating!

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. . . lasting beauty for package, glass pack, and frozen food wraps

This page is finished with Tuff-Coat.
Muirson Label Co., Inc.—San Jose, Calif., Peoria, Ill., and Meriden, Conn.

thousands of readers
in thousands of plants
will keep it
on their desks
all year long

A new and improved volume is in the making. It's called the "Yearbook Number."

Many New Things For You:

For instance, a modern approach on statistics. In the four big fields of canned, glass, dry and frozen foods, national figures have been collected and are listed comprehensively.

This is just one reason why the Canner/Packer Yearbook Number will become a fixture on the desk of the Manager of the sales department all year long.

Reference Data—Complete, Accurate and Current:

Production, procurement and traffic men will replace the present jumble of reference books they presently need with the most complete volume of reference data ever compiled. A one-book "library" for every department of the processed food plant.

Here is a list of a few of the major items in the yearbook:

1. The Gold Medal Award winners—50 outstanding new or improved products for food processors.
2. Processed food equipment and supplies are listed in a classified index. The suppliers are listed in an alphabetical index.
3. Top scientists reports on research advances.
4. Leading executives summarize the status of food products in their fields.

For Processors Only:

Processors advertising in the Yearbook Number will be included in a big 100-page promotion booklet, Food Distribution, at no extra charge. This booklet will be distributed to 3,000 major buyers of processed foods.

In September, remember there will be two issues, the regular issue of September 1 and on September 15 . . . The Yearbook Number.

CANNER/PACKER

Yearbook

number

LETTERS FROM READERS

Food Protection Factors

The Department of Food Technology of the Massachusetts Institute of Technology is presenting a symposium, June 22-26, 1959. We're working in collaboration with key personnel of the U.S. Food and Drug Administration and various industrial organizations in the food industry, including a representative of the meat industry, dairy industry, packing industry, baby food industry, thermal processing industry, flavoring extract industry, color industry, vitamin manufacturers, and fat and oil industry.

This program relates to food protection factors in modern food technology and deals with the various aspects of food protection and food additives facing the food industry today as a result of the new act passed by the Congress in Sept. 1958.

Such factors as compliance, regulation, mechanics of testing, toxicology, propriety of use, packaging, radiological fallout, as well as the residue problem and nutrition in relation to food processing will be presented.

Professor Bernard Proctor, head of MIT's Food Technology Department will direct the program.

Speakers will include Mr. John L. Harvey, Dr. Arnold L. Lehmen, Dr. Edwin P. Laug, Mr. W. W. Goodrich, Mr. Arthur Checci, and Mrs. Lessel Ramsey. In addition, key personnel from the food industries will act as panel leaders and discussants.

S. A. GOLDBLITH

Executive officer, Department of Food Technology, Massachusetts Institute of Technology.

Meeting at Kennebunkport

The Maine Canners' and Freezers' Association will hold its annual meeting June 16 and 17 at the Colony at Kennebunkport, Me.

J. W. GAULT

Executive secretary, Maine Canners' and Freezers' Association.

Boil-in-the-Bag?

We are making a study of the boil-in-the-bag method of packaging frozen foods, for both consumer and institutional use. Since this is a comparatively new innovation in the industry, we have little published data to work with. We would be very grateful to receive copies of any articles you have published on boilable bags, and any research you have available that has not been published. In addition, if you have any general information that might apply to the subject, or can suggest possible other sources of information, this would be most helpful.

J. S. ROSS, JR.

Plans and Marketing Dept., N. W. Ayer and Son, Inc., West Washington Square, Philadelphia, Pa.

• *We forwarded to Mr. Ross the articles published in recent issues of CANNER/PACKER, and we agree to the scarcity of general marketing information on this product. If any readers can help Mr. Ross, they are invited to do so.*—Ed.

Old Issues

We have received a request from our associates abroad for the following: "The Canner, 110, 18 (1950)."

If this is still available, we would appreciate very much your sending us a copy. If the material is not available, we would appreciate very much if you could send us a negative photostat.

LEONARD STOLLER

Advertising manager, Givaudan-Delawanna, Inc., 321 West 44th St., New York 36, N. Y.

Thank you so much for having a reproduction made for us on the Man-of-the-Month article about Vincent A. Davi *(Food Packer 1956)*. We do appreciate the special effort this meant on your part and your cooperation with us.

The article will be placed in a Pittsburg Persons biography section of the new Community Section which we are preparing for our professional library.

Mrs. Fern Davis, director of libraries, joins me in expressing appreciation.

MRS. MARY ERICSSON

Library clerk, Pittsburg Unified School District, Pittsburg, Calif.

• *Since the merger of the three magazines, Canner and Freezer (still earlier, back in 1950, it was "The Canner"), Food Packer and Western Canner and Packer, we have received requests for copies of the publications—sometimes in whole, sometimes in part. For some months in recent years, we can still supply copies of the magazine. For others we have on hand reprints of particular articles. In case of the articles which appeared back as far as 1950 we can photostat the pages (the negative, as Mr. Stoller mentions, costs less than a positive). In any case, we will be happy to help any reader get the original information, whenever it was published.*—Ed.

This **Trade-Mark**

on **billions** of
glass containers

is backed by **O-I resources** for **research, engineering** and **development**

Today's Duraglas® Containers...with the O-I trademark on the bottom . . . are the finest you can buy to protect your quality products.

This unmatched quality is the result of Owens-Illinois research and development carried out today by scientists and glass specialists at the Owens-Illinois Technical Center.

Here the goal is to make Duraglas Containers still better by developing better glass, better glassmaking methods and by manufacturing on a test basis before the new developments can be employed by one or more of O-I's manufacturing plants.

The O-I Trade-Mark signifies the quality, research, engineering and design which stand behind every glass package manufactured by Owens-Illinois.

For the finest glass packaging . . . the right containers, plastic or metal closures, label designs, cartons—plain or imprinted with your sales message . . . see Owens-Illinois or call our nearest office today.

DURAGLAS CONTAINERS
AN (O) PRODUCT

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preventing your shipments from arriving

The **DRI-PROTECTO CAR is a compact car offering maximum protection from heat or cold for those long hauls of straight loads where temperature extremes are encountered. Movements of dry commodities that require that extra protection for customer's satisfaction are best handled in this car. The DRI-PROTECTO CAR also offers complete protection against infestation.

The DRI-PROTECTO CAR is heavily insulated and offers a smooth, flush interior and can eliminate or greatly reduce car preparation costs. Consult with NORTH AMERICAN. Test cars furnished promptly.

**AAR Classification—R.B.

Important features of the DRI-PROTECTO CAR

1. Inside of doors are flush with sidewalls, eliminating doorway strapping and providing smooth wall from end to end.
2. Smooth varnished interior walls, reducing or eliminating sidewall cooperage.
3. Six-foot sliding steel doors, allowing free movement of mechanical loaders in and out of car. Palletized loading.
4. Fully insulated—sidewalls, roof, floors and ends.
5. Constant temperatures because of insulation reduces or eliminates condensation.
6. Extremely tight construction of car provides cleaner lading for consignee.
7. Availability of identical cars is beneficial to pattern-type loading.

*1 HEAT 2 COLD 3 INFESTATION

REMEMBER—IF IT'S NEW, IT'S NORTH AMERICAN

these CULPRITS

2

3

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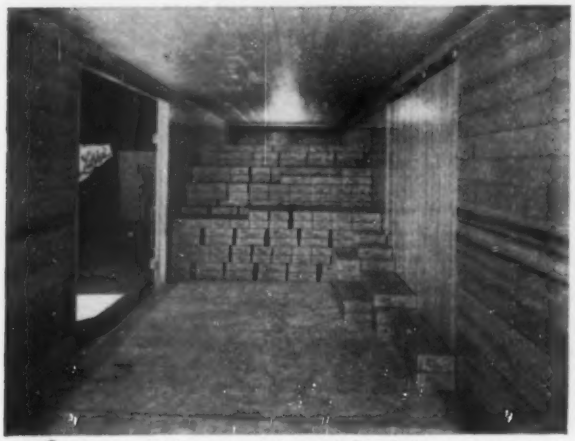

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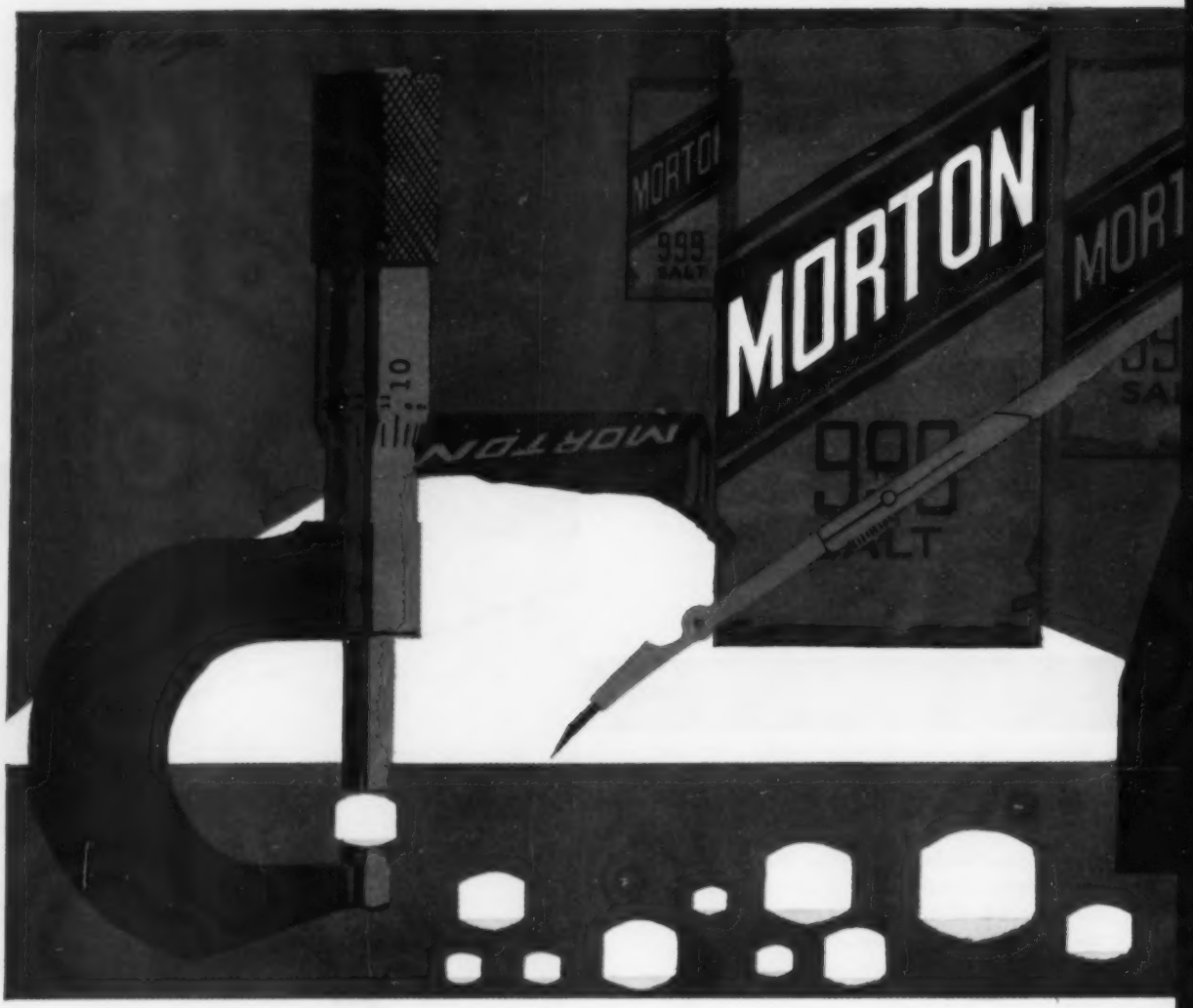

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Morton '999' Salt is the highest purity salt commercially available everywhere in the United States. '999' is a low price, premium grade salt entirely free from bitter calcium and magnesium compounds that can distort flavor. Morton '999' is always 99.9% clean, pure sodium chloride, exceptionally low in the trace metals copper and iron.

What's more, '999' quality never varies from shipment to shipment whether you buy a bag or a carload.

Morton also offers you high purity '999' Salt in handy tablet form. You get tablets that are always the exact weight, size and blend you require for accurate flavor control.

Morton combination tablets are precision made to your exact requirements. You can order Morton Salt blended in unvarying amounts with ascorbic acid . . . spices . . . citric acid . . . sulphur . . . M.S.G. . . . calcium chloride and other flavoring agents. Tablets come in 10-grain to 400-grain sizes.

Morton offers a complete line of tested and approved dispensers to help you reduce labor costs, eliminate waste and assure better flavor control through accurate dispensing of seasonings and preservatives. Technicians are available to help you select and install the dispenser or brinemaker best suited to your needs . . . to assist with initial use and provide regular follow-up maintenance to assure efficient, trouble-free operation that saves you time and money.

All dispensing and brinemaking devices are serviced by Scientific Dispensing Co. Division of Morton Salt Company.

and dispensing service to meet your special needs

The amazing Flocron Liquid Dispenser works electronically—remote controls permit you to "dial" the exact amount of liquid ingredients required for various can sizes. Handles up to 300 units per minute. Can be operated on existing equipment without revising existing production lines.

The Salt Tablet Depositor automatically deposits salt tablets in as many as 700 cans a minute. Guaranteed accuracy. Automatic models work on a "no can, no tablet" and a "no tablet, line stops" basis. Depositors come in special sizes . . . will place tablets in narrow mouth bottles, cans and jars.

The Morton Model-E Brinemaker is specially designed to produce up to 800 gals. of brine per hour from readily available '999' Salt. No space-wasting storage tank needed. No need for costly shutdowns for cleaning out sludge or impurities.

The Bulk Salter Machine dispenses salt, sugar, M.S.G., and other seasonings in dry form. Serves up to 400 cans per minute—if no can is present, no seasoning is released. Machine can be filled and supervised by unskilled labor.

Write today for more information!

We'll be happy to send you more information about high purity Morton '999' Salt . . . the Model E. Brinemaker . . . Flocron Liquid Dispenser . . . Bulk Salter Machine or the Salt Tablet Depositor.

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accent true fruit flavor...

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Introducing a completely new principle of size grading, this amazing machine has been proved capable of *doubling production capacity* of conventional type machines, without loss of grading efficiency. No additional floor space is required.

Although this machine was originally designed for grading whole green and cut beans, it is ideally suited for sliver elimination of French-cut potatoes, and similar diced or sliced products.

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Doubles Production Capacity!

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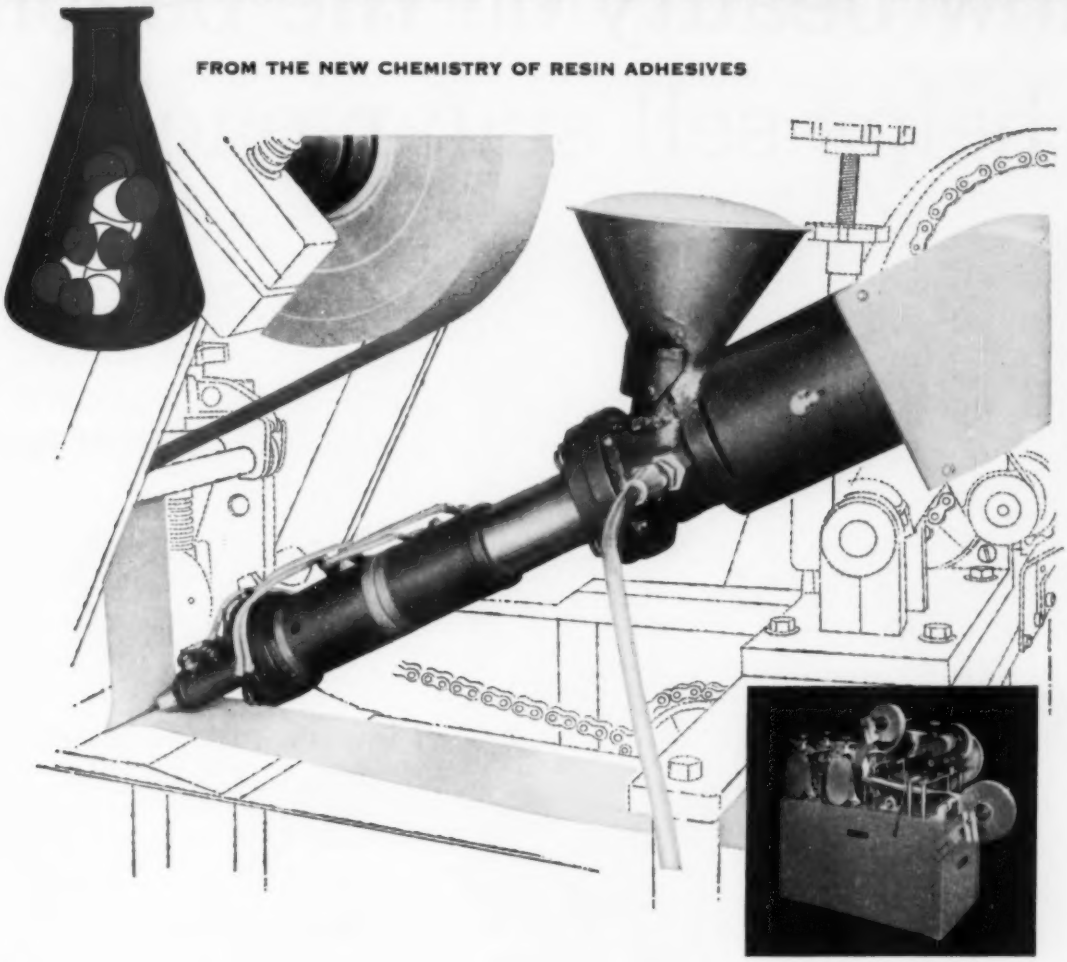
NOW! INSTANT BONDS ON IMPERVIOUS SURFACES

FROM THE NEW CHEMISTRY OF RESIN ADHESIVES



Instant-Lok GRANULAR HOT MELTS

A spectacular advance for packaging! An instant bonding, 100% solids, resin adhesive for polyethylene, foil, wet strength kraft and other tough stocks. For unlimited machine speeds. Any stock. Immediately available with National's INSTANT-LOK Granular Hot Melts and the new INSTANT-LOK Applicator shown above on a demonstration model.

INSTANT-LOK HOT MELTS extrude into a thin, continuous, instant bonding glue line. No compression is required. They are the lowest cost form of adhesives—100% solids. Your only cost is for adhesives. No water. No mixing or preparation. Available in a range of formulations to meet any bonding requirements.

INSTANT-LOK APPLICATORS can be adapted to machines you are now using or specified on new machines. The design was developed by National. Produced by Potdevin.

INSTANT-LOK BONDS are suggested for bag seaming, carton sealing and forming, tube winding, and other converting operations. We're ready to work with you right now!

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How beauty on the beach helps sell sugar packs

How do foods containing sugar (including canned foods) help a girl look her best in a bathing suit?

Sugar advertising points out the simple truth:

Figure control is mainly a matter of appetite control

Nothing satisfies appetite as fast as sugar

This informative ad in the current Sugar advertising campaign helps tell our sugar-for-weight-control story to 74 million Americans. Each ad in this series also explains how *sugar enhances flavor*, and how *sugar provides quick energy*.

SUGAR INFORMATION, INC.
New York 5, New York
SUGAR means sucrose (both cane and beet)

your product belongs

in glass by Brockway

Is YOUR product in evidence when culinary "experts" don the chef's hat to prepare a feast that is fit for a King? The first requirement is consumer acceptance . . . acceptance of the fine taste and special goodness of your product . . . and acceptance for the container in which it is presented for sale. ● Nothing will make a good product more readily acceptable than a quality glass container by Brockway . . . a container that presents the product with all its appetite appeal . . . a container with unique clarity to provide sales appeal unmatched by any other type of container. ● A product that is worthy of consumer acceptance deserves a quality glass container by Brockway.

SYMBOL OF QUALITY IN GLASS CONTAINERS

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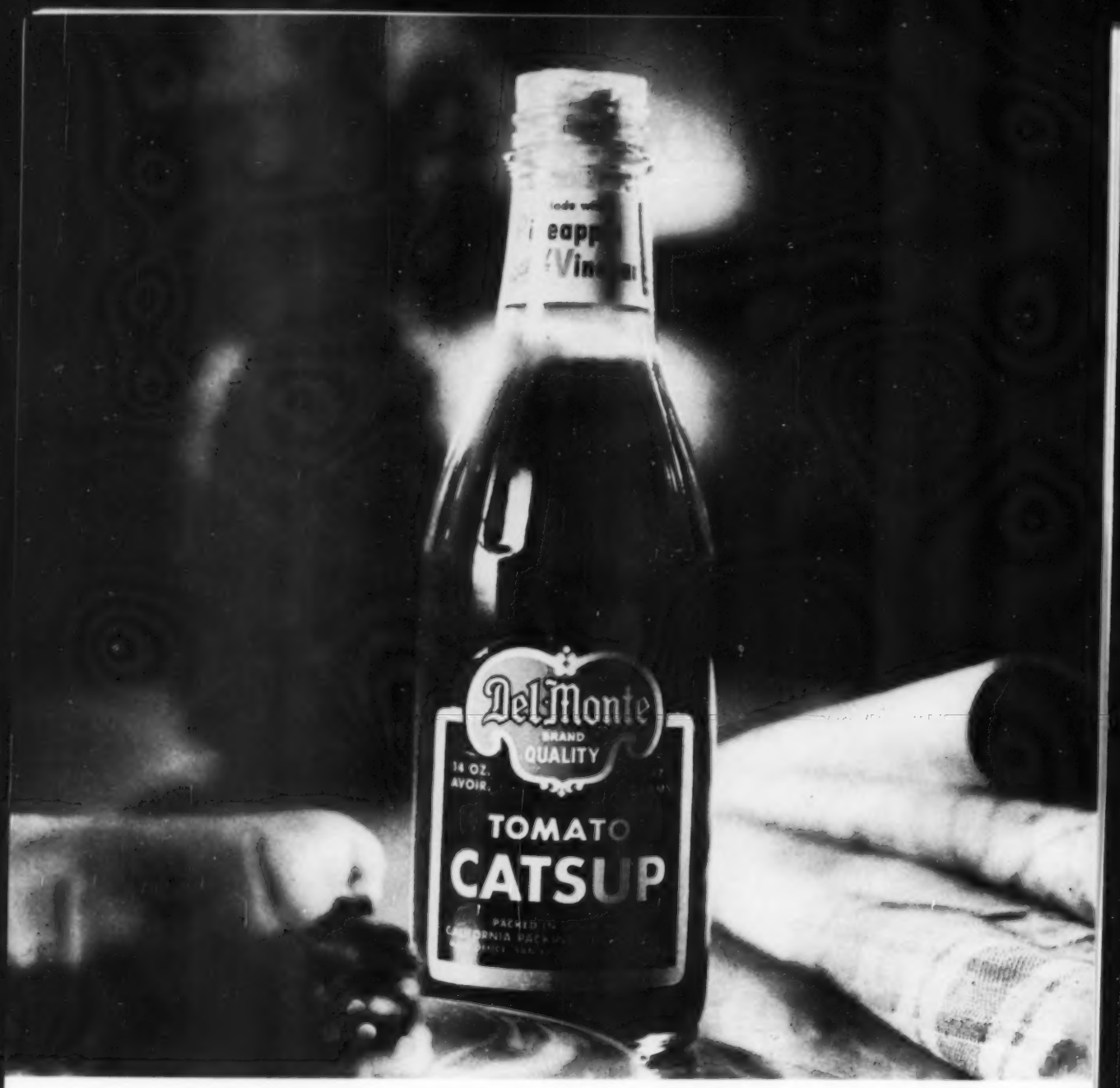

Profitable Brands Start With Cherry-Burrell

Smooth. Even textured. Pours easy, too. On meats from steak to hot dogs. Del Monte Tomato Catsup is the flavor favorite of so many families.

Pineapple distilled vinegar makes tomato flavor come alive in Del Monte Catsup — every bottle, every time. Cherry-Burrell Superhomo homogenizers are used to insure this flavor uniformity — smooth, even texture, too.

Superhomo homogenizers do the job so thoroughly there's no chance of liquid separation back to a pre-homogenized state. High-speed shearing action of homogenizing valve reduces pectin particles to equal size. Disperses them, plus flavoring oils and other ingredients, evenly throughout the product.

In-plant profits, too. Hydraulic sealing for maximum wear. Pressure inside of cylinder block takes over during operation. Completely seals all gaskets. Gives longer gasket and plunger life. Low operating pressures cut down peak load demands, reduce wear on moving parts.

Another Cherry-Burrell product used extensively in the food industry is the Thermutator heat exchanger. Specially designed for use on heavy-bodied products, it heats to 350° F., cools to – 50° F. without burn-on or freeze-on.

A Cherry-Burrell Sales Engineer will be glad to show you how these and other Cherry-Burrell products can help solve your processing problem. Call today. *Sales and service in 58 cities.*

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Food • Dairy • Farm • Brewing • Beverage
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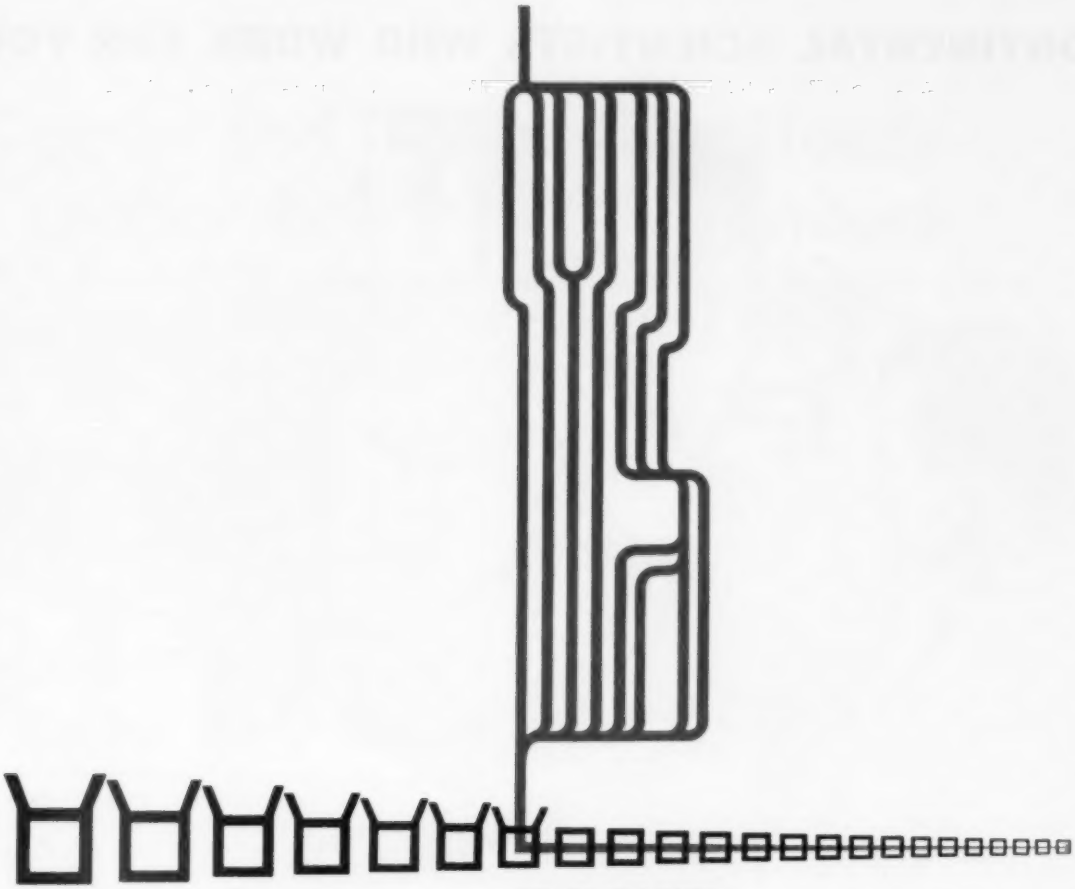

POINT OF NO RETURN

In your plant, your product gets all the best of it . . . you control the materials and methods, the care and inspection that make it right. Beyond the point of packaging, you lose this control. From that point on, your product will have the safety and handling efficiency its package permits—and no more. In the market place, your product will have the sales appeal its package communicates—and no more. Your best control over what happens beyond the point of packaging is in your choice of packaging supplier.

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FOLDING CARTONS
SHIPPING CONTAINERS
SEFTON FIBRE CANS
PLASTIC PACKAGING

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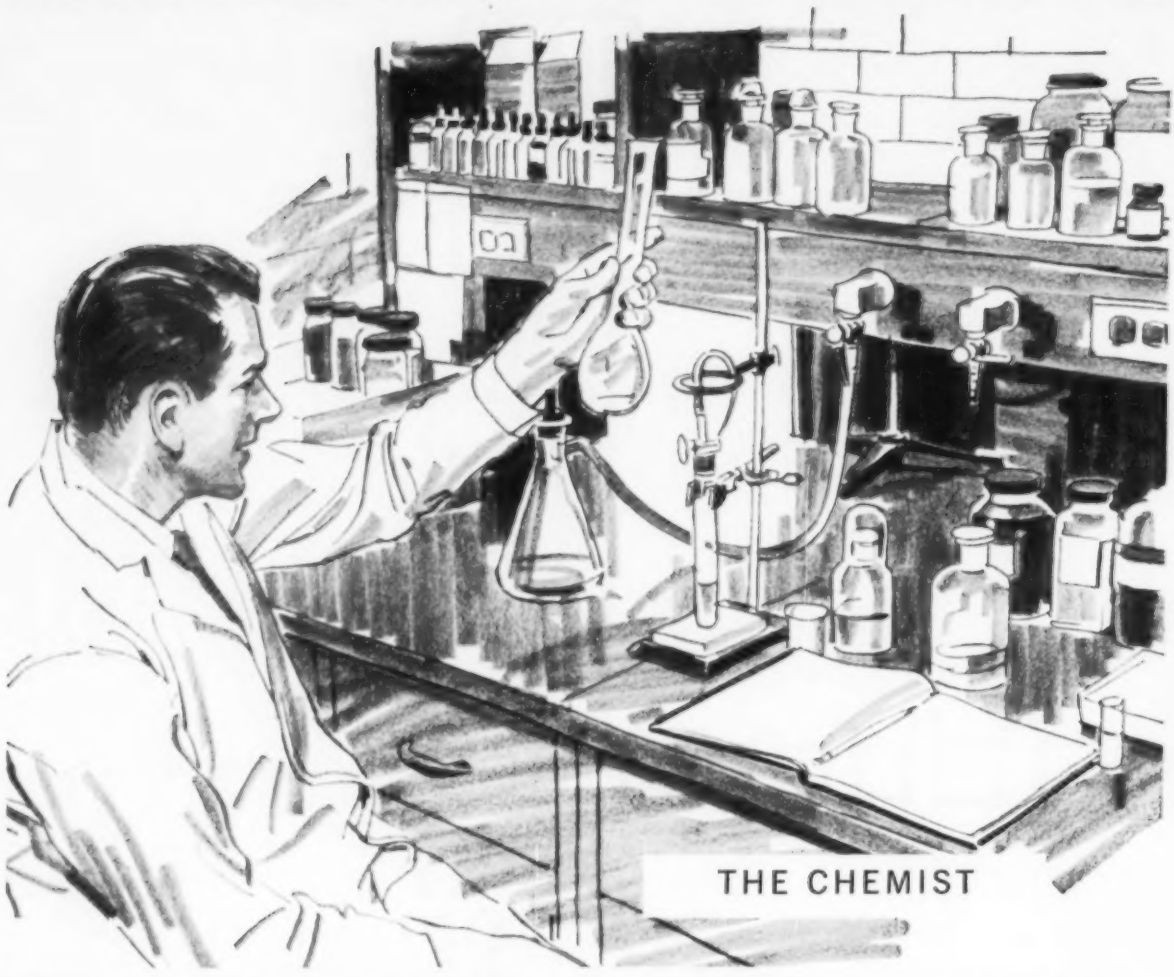


When packaging developments hinge on chemistry Continental customers get them first

All matter is composed of elements – usually two or more of them in a molecule or compound. Through chemical science, man can isolate the elements, then combine, rearrange or transform them for new usefulness. That is why the chemist is an indispensable man on the scientific team at Continental's big new Metal Division Research and Development Center.

On behalf of canners, Continental chemists formulate coatings and sealing compounds to protect metal-packed products against changes in color or flavor. They study relationships in the chemical and physical behavior of these substances, break them down into their constituents, and determine their extractability by the product.

Utilizing controlled temperature facilities which range from −40° F. to +130° F., they conduct extensive storage tests to determine container-product compatibility. High polymer chemistry is emphasized in a current project to develop adhesives for cemented side seam cans that will withstand high temperature processing, while electrochemistry is being utilized to determine the corrosiveness of products and develop techniques to eliminate the corrosion problem.

Few canners could maintain the elaborate and expensive equipment available to Continental chemists. But this equipment and the know-how that goes with it are always working for you as a Continental customer.

CONTINENTAL CAN COMPANY

Eastern Division: 100 E. 42nd Street, New York 17
Central Division: 135 So. La Salle St., Chicago 3
Pacific Division: Russ Building, San Francisco 4
Canadian Division: 5595 Pare St., Montreal, Que.
Cuban Office: Apartado 1709, Havana, Cuba

Canner and Packer Field Heads Consider Raw Products Institute

Majority of those queried show interest in an idea, but only if not competitive with present regional and national associations

Almost two-thirds of the raw product executives of U.S. canning, freezing and dry food companies look with some favor upon the establishment of a national institute to provide for a freer exchange of useful information on processing crop production.

They would like such an organization, however, only if it did not duplicate existing services of regional and national packer associations. And they would like to see it operate on a modest basis, with regional chapters and a national secretary but all on an unpaid basis.

These opinions were expressed by a number of typical field department officials, all members of the raw product committee of an existing association, in a poll suggested by several of their number and conducted by Canner/Packer.

Is It Needed?

On the basic question of whether or not such an organization should be formed, 35% said they favored it strongly, 30% said such a group would be of some use, and 35% opposed the idea. The opposition was almost entirely on the basis that raw product committees of the packers' associations were adequate to the task, or could be expanded to become so. Typical comments along this line are:

"We are presently making a substantial effort in this area (Michigan) through support of our state and national processing organizations. . . I feel that we have the necessary organizational framework and that we have made fine progress. There are undoubtedly numerous opportunities to improve and expand on what is being done. I feel that the best interests of our industry can be served by strengthening our present organization in preference to creating a new one."

"We are a member of National Canners Assn. and New York State Canners & Freezers Assn., both very active and both disseminating pertinent information. Accordingly, we feel much of this work would duplicate and overlap present associations."

"There are national organizations of the canners and freezers that have raw product departments in their organizations. It is quite possible that by contacting the managers of each of these we could work out a satisfactory plan within the structure of an organization already in existence."

"We feel that the already existing raw products committees of the national and state canners associations are doing an excellent job. Membership in similar institutes already strains time and travel budgets."

Some Say Yes

Those favoring an institute largely do so because of one of two reasons.

First, there are those who feel it would add stature to the position of field department manager, not just to flatter the ego of such men, but to enable them to discharge their duties better. Typical comments are:

"This would help to recognize the importance of fieldmen."

"Fieldmen definitely need recognition of the importance of the job they are doing."

Secondly, some believe there is not enough interchange of information between geographic areas, or between branches of the processed food business. Typical of these are the remarks of one raw product official who phoned a Canner/Packer office and said:

"Our state group is very helpful, but I'd like to know what is going on in other areas also. Also, my association is concerned with canning only; I'm sure I could learn from freezers or pickle packers, or even peanut growers."

Who Should Join?

If such an institute were formed, with the cooperative of state and national packer associations, its membership should include not only raw product officials of packing companies, but also manufacturers of equipment and supplies for crop production, and scientists from government agencies, colleges and universities, etc. This was the almost unanimous opinion.

However, 83% of those voting favored having an active membership category for employees of processing firms, and an associate membership for others.

As to activities, those questioned felt such an organization could concern itself with improved varieties, better growing and harvesting methods, improved insecticides and fungicides and other chemicals, better handling, better relations with growers, etc.

Almost all the respondents felt there should be an unpaid national secretary, but that the institute would function best with local chapters, able to work on regional problems as well as to pass along information from other areas. Chapters should meet as often as they desired, it is believed, but there should be one national meeting a year, preferably in connection with the national canners' or freezers' conventions if that could be arranged.

What Should It Be Called

If such an organization should be established, the men favoring it voted to name it "Processors Raw Products Institute," 75% to 25% for all other names suggested. The major consideration seemed to be that they favor the term "raw products" in connection with their work, rather than "field." Said one:

"The name 'fieldmen' should be avoided, for the organization should be for those of a higher strata. A fieldman is the man actually in the field with mud on his boots."

As to whether all processing crops should be covered, or only those for canning and freezing, the first or broader coverage seemed to be preferred, although there were comments that a canner-freezer membership would be broad enough.

Readers wishing to comment on the possible establishment of a Processors Raw Products Institute, either pro or con, are invited to write the editor.

JAMES GLOVER, left, president of Coastal Foods Co., with S. M. KENNEDY, right, head of the parent firm, Consolidated Foods Corp. Between them is Coastal's "Phillips Crest of Quality" label, sales of which have been expanded by . . .

Building a Hard-hitting Management Team

Maryland canner / freezer creates new sales/packing organization

By ROBERT L. LAYTON

"Modern management is the proper application and organization of an individual or individuals into a smoothly functioning whole. If a business can be molded into a compact and efficiently running machine, it will almost certainly be successful," states James E. Glover, who has used this credo in organizing the largest combined canning and freezing operation on the Atlantic Seaboard.

Starting as executive vice president and general manager of Coastal Foods Co.—which was created by merging Phillips Packing Co. of Cambridge, Md., with Gibbs & Co. of Baltimore in 1957—Mr. Glover one year later was elected president as a result of his business strategy and accomplishments. With headquarters in Cambridge, on Maryland's famous and historic Eastern Shore, Coastal Foods Co. was created after Consolidated Foods Corp. acquired both Phillips and Gibbs.

Building a Team

The parent firm sent to Cambridge to build and organize this new Eastern Division a man with a reputation of dynamic accomplishment. A former law partner of Maine's Senator Edmund Muskie, the new 44-year-old chief executive came to Coastal from National Cranberry Assn. where he was president. He has built up a management team which Consolidated President S. M. Kennedy of Chicago has called "the very best in the industry."

Mr. Glover's first move was the selection of individuals to head three new departments deemed necessary for appraising product quality, developing new products, improving and maintaining uniform quality, and marketing products in a modern manner.

Coastal went after persons known to have achieved success in their respective fields. The department heads brought not only specialized knowledge but diversified and wide experience.

Three Department Heads

The only woman member of this staff, Heloise Parker Broeg, director of consumer relations, was the first on the scene at the headquarters in Cambridge. In addition to having operated test kitchens and her own food manufacturing business, she has been a broadcaster on radio and television, and also a lecturer, publicist, newspaper and magazine editor.

James A. Langley, marketing director, has the responsibility for both frozen and canned food sales. He is familiar with markets in 48 states, possesses the experience gained over an 11-year period of food marketing, advertising, sales promotion and sales. Also he has headed a food processing department of a national firm and held the position of district manager with the same concern.

William F. Filz, technical director, equipped with two degrees in food technology, has had experience in practically every phase of food processing from actual design and construction of the plant to production, product development and quality control. Not only has he done extensive research and created new products but has also published technical papers.

Office Moved to Plant

Along with the creation of the three new departments mentioned above, Mr. Glover evaluated the experience and capabilities of all regular employees. This was followed by cutting down the number of individuals in over-staffed departments and inaugurating more efficient methods of operation, while attempting to place former employees in positions as department heads. Qualifications and aptitude for specific vital work were carefully evaluated.

Coastal's head man also felt that effective supervision and close quality control could not be properly maintained or checked by executives in offices so far removed from the processing plants that appreciable time loss resulted from frequent trips for inspection or conference.

The main office on Cambridge's business thoroughfare, over a mile from the plants and long occupied by the predecessor, Phillips, was abandoned for new quarters which were designed and built on the top floor of the frozen food plant. This was in January, 1958, just a half-year after Coastal Foods Co. was created.

Maintenance of Quality

Today quality control is the keynote at Coastal with all individuals responsible for inspection at various

stages of the processing operations working as a team.

Control starts with the field service department inspecting the seed, watching over the growing vegetables and expediting the harvest. All raw food materials are subjected to uniform examination before acceptance, with inspection continuing all along the processing lines and ending in the cutting room. Here packages and tins of frozen and canned products are sampled in the presence of marketing, sales, technical and consumer relations directors, joined by Coastal's president for a final check. Only then can personnel in charge of production and laboratories be sure standards set have been met, Mr. Glover believes.

He adds that much time and effort have been expended in raising the quality standard of all canned products. Formulae have been carefully reviewed and changes made by the technical director. Production methods have been consolidated and streamlined. Coastal receives letters daily telling of the improvement of quality in the soups being marketed.

The firm has dressed the up-graded "Phillips" brand of products in a new label. Coastal's "Crest Of Quality" is an identifying part of the design on this blue and white label, which is reported to have received favorable comment from both the food industry and consumers.

New Items for the Line

Technical Director Filz has developed two new products which have been added to the Phillips line in the past two months. Cream of mushroom soup brings the total number of soups being packed to seven. "Luau sweet potatoes," sweet potato and pineapple chunks in heavy syrup, are being marketed in No. 3-squat cans.

Last year, Mr. Glover appointed a new products committee of seven members, each to have a distinct and quite different approach in proposing or discussing any new product. The committee includes the director of raw products procurement, production manager, technical director, marketing director, canned foods sales director and comptroller, with the director of consumer relations as chairman.

Presently under construction is a pilot plant being set up for the dual role of (1) determining the quality of incoming raw produce so it can be channeled to the proper processes for maximum yield and profit and (2) playing its part in the normal progression of product development.

Mrs. Broeg, or "Peggy Phillips," as she is known, works very closely with Mr. Fitz in creating new products. She takes the initial step by creating dishes in a test kitchen, then submitting samples of the proposed products for taste-testing by main office employees.

Marketing Techniques

Sales of frozen vegetables have increased markedly in recent seasons, according to Marketing Director Langley. Although most of the pack was previously sold under buyers' labels, a new "Coastal" brand on grade A frozen vegetables, placed late last year in a test market, gives promise of even greater sales volume this year, Mr. Langley indicates.

The complete marketing structure has been changed with a stronger and fresh sales plan replacing that formerly in existence. The entire sales force is new, with Calvin W. Mowbray as director of canned foods sales. The primary distribution area (from the Atlantic Seaboard to the Mississippi River) has been divided into five geographic sections with area managers for each section. Changes in the broker set-up have been made to augment and strengthen the sales picture.

This is the way one man, obsessed with a belief in efficient production of "quality" products is making studied moves. Mrs. Broeg likens President Glover to a chess player in a game which is described as "an intellectual contest devoid of any element of chance."

When Mr. Glover was asked if he played chess, he replied: "I did once; no time for it now. Besides, this is more fascinating."

Pack and Backround

For over forty varieties of vegetables sold to Coastal Foods Co. in Cambridge last year, farmers from Virginia, Delaware, Pennsylvania, New Jersey and Maryland cashed five million dollars worth of Coastal checks.

Estimates have it that a thirty-mile long freight train would be necessary to haul the five million cases of food which were canned last year. Another 25 million pounds of frozen food was processed.

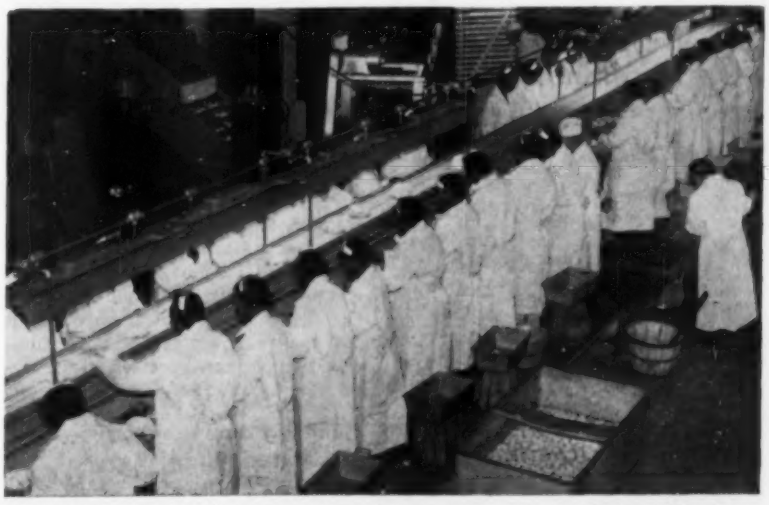
Coastal's predecessor, the Phillips Packing Co., grew out of a partnership formed in 1902 by three Dorchester oyster packers. Each spring they transformed their shucking houses into tomato packing plants.

Through a half-century, by building new factories and acquiring other small canneries, the Phillips partners emerged with a million feet of factory space divided among 16 plants in eleven Maryland and Delaware communities, with Cambridge remaining as headquarters.

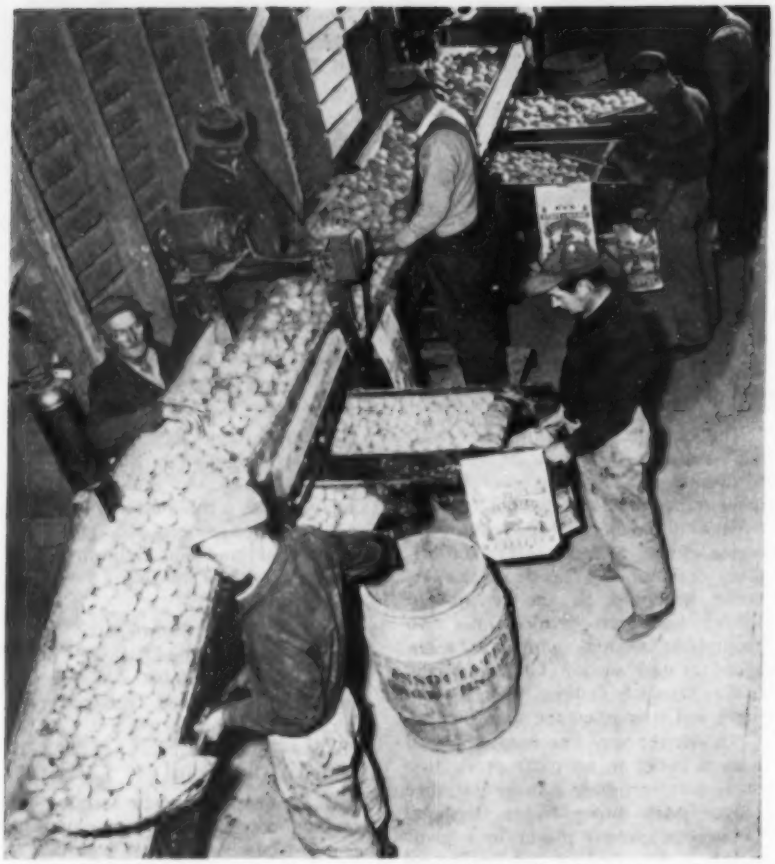
In July, 1957, Consolidated Foods purchased the Phillips Packing Co. for a reported $3,000,000. Within six months, Consolidated recouped two-thirds of that figure when it sold the Phillips can-manufacturing plant to National Can Corp. for $2,000,000.

In a community where farming and seafood create seasonal employment, one of Coastal's long-range goals is to have a year-round work force of 2,000.

The acquisition of Coastal Foods by Consolidated Foods Corp., was a part of an aggressive expansion program during the past few years. The parent corporation, a wholesale grocery manufacturer and processor also operates retail supermarkets in the Midwest.



CAULIFLOWER FOR FREEZING is inspected and trimmed on this line at the Cambridge frozen food plant of the company.



MAINE POTATOES are noted for flavor, texture and other quality characteristics. They do come in assorted sizes, however. Here they are being graded into uniform sizes. This is one of the factors in . . .

How Quality Potato Products Are Frozen by Taterstate

Non-operative plant turned into asset to community and source of fine foods

By Mary Freeman

Taterstate Frozen Foods — located on the Aroostook River at Washburn, Maine — was originally operated by McCormick & Co. to dehydrate potatoes for the armed forces in 1942. In 1946 Maxson Food System took over the plant and converted it into frozen French fried potato operation. The venture proved unprofitable, however, and was discontinued.

In 1948, concerned over local unemployment and also with the problem of disposing of surplus potatoes, Harry E. Umphrey determined to reopen the plant and to increase its operations. He enlarged the building, installed new machinery, and began the frozen production of both French fries and potato puffs. Taterstate runs from October to June, and employs about 200 men and women, plus the additional employment created in the potato storage houses.

Handling Raw Products

Taterstate officials consider the ideal potato for processing to be the certified Katahdin in the size range of 2½-4 inches. Kennebec and Russet Burbank rate equally as second choice, and some other varieties are used if they meet all the requirements of starch, sugar, moisture content, etc. Potatoes from each farm are kept segregated in separate bins, to help insure uniform quality and appearance.

The raw product is tested before it is purchased, again on arrival at the receiving dock, and frequently during the preparation and processing steps. If any serious defect appears, operations come to a standstill until the undesirable stock is eliminated or production methods are adjusted so as to restore quality to the desired level.

About 800 barrels are processed per day. When a bin has passed all the required tests, the potatoes travel by chute to tanks and flumes in which they are carefully washed before elevators carry them to the peelers. These latter are Pfaudler units, in which the skins are removed by steam under 90 lbs. pressure. The potatoes are then washed again, in chlorinated water, after which a conveyor system carries them to the trimming tables.

Trimming and Slicing

In the trimming department, women workers inspect the stock carefully as it passes before them on moving belts. Any specimen which shows sunburn or discoloration, or which is below quality requirements in any other way, is either trimmed or discarded here. Any peel still adhering, especially around the eyes, also is cut off at this point.

Center take-away belts now carry the product to Urschel slicers, where it is cut into correct sizes for French frying. The cuts then pass under an Eriez magnetic separator, to make sure that no nails or other tramp metal go beyond this point. Sinclair-Scott size-grading equipment then screens out all small or irregular-shaped pieces, and at the same time washes off excess starch.

The finger-shaped pieces now pass through three A. K. Robins & Co. steam blanchers, for enzyme inactivation. They then are conveyed to a last sizer, and are given a final inspection, before the frying begins.

Frying and Freezing

Woven-wire belts take the blanched potato fingers through three stages of frying, a continuous process designed to maintain texture and color at top-quality levels. About a carload of hydrogenated vegetable oil is used a week, and this also is of a specified high quality designed to avoid later rancidity or other product deterioration.

As the fingers emerge from the final frying stage, they are sizzling hot and must be conveyed to a pre-cooling area before being frozen. Woven-wire belting is again employed, and the conveyors maintain a steady vibration which shakes off all excess fat.

Freezing takes place in a blast-type tunnel, cooled by Carrier refrigeration to a temperature of −30° F. Chilled here for 30 minutes, the potatoes are then conveyed to wire-belt inspection tables for a final examination before they are packaged.

Cartoning and Weighing

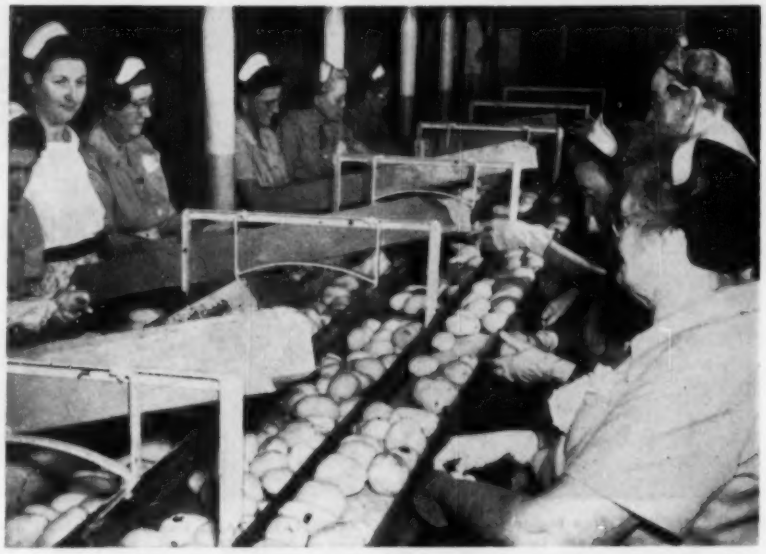
Weighing and packaging formerly was a hand operation, but today Wright packaging equipment automatically fills and weighs cartons at the rate of 90 per minute. This is a four-stage operation at Taterstate. The first, a product feed conveyor, separates the potatoes into large and small pieces; such a continuous flow is maintained from the freezing tunnel that the fingers do not cling together, and this step is readily accomplished.

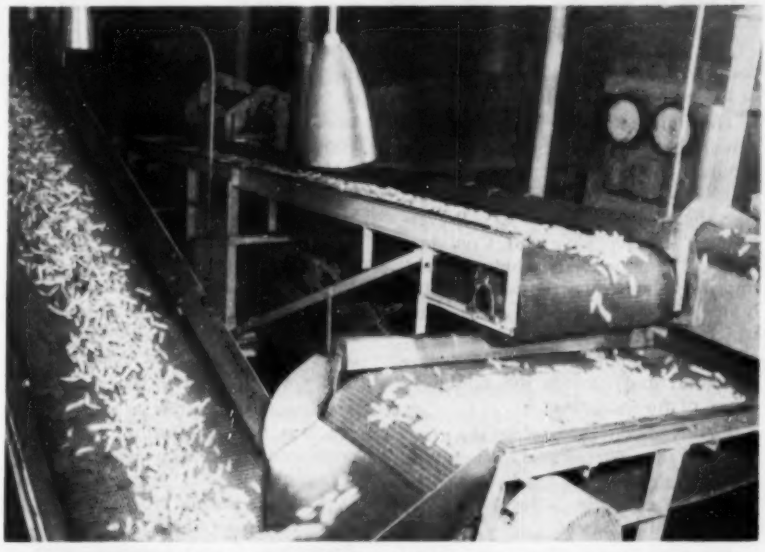
The second stage is that of filling the package to approximately the net weight called for. The third, still automatic, adds smaller pieces of product until the exact fill is achieved. The fourth operation automatically positions the filled containers and delivers them to a station where they receive a final manual check on Exact Weight over-under scales.

Cartons used by Taterstate are set up by kliklok machines, and supplied by Container Corp. of America. Over three-fourths of the pack of French fries is put up in 9-oz. packages, packed 24 to the case. The balance goes into 1-lb. cartons, 12 to the case.

Wrapping and Casing

After the cartons are closed, they are overwrapped with Package Machinery Co. units. An important part of the pack is sold under Taterstate's own brand, for which wraps are supplied by Marathon Div. of American Can Co. and by Western-Waxide Div. of Crown Zellerbach Corp. However, the Maine firm also processes for private label buyers, more than two





BELT CONVEYORS play a major role in transporting the product through Taterstate's plant. AT TOP: Potatoes fresh from the peeler travel down the outside lanes of the rubber belt conveyor, for inspection by women workers, and for trimming and culling as may be required. SECOND: Frying is a three-stage continuous operation, with woven-wire belting carrying the stock through the triple cooking steps. BOTTOM: After frying and freezing, the potatoes again travel by woven-wire belt past inspectors en route to the packaging area.

HARRY UMPHREY, New England businessman who saw an opportunity for his community, and made the most of it.

TATERSTATE BRAND frozen French fried potatoes, packed in the popular nine-ounce carton and overwrapped with the firm's colorful label. The Maine firm also puts its product in one-pound cartons, and packs for private label buyers.

dozen of whose brands also are applied in the wrapping operation.

The finished frozen product now is cased, the shipping containers being supplied by such firms as the Robert Gair Div. of Continental Can Co., Kieckhefer-Eddy Div. of Weyerhaeuser Timber Co., and Container Corp. of America. An automatic case-imprinter then codes the case with the brand, the shift and the product, after which a Standard-Knapp case gluer and sealer completes the packaging operation and records the output in terms of finished cases.

Finally, a conveyor carries the product to the refrigerated warehouse, where Yale fork-lift trucks stack the palletized cases in −10° F. storage rooms until shipment.

Shipping is in either refrigerated rail cars or refrigerated vans. The former carries from 2,500 to 3,500 cases, the latter about 1,700. A special conveyor carries the cases to the shipping dock. From Washburn, Taterstate products regularly move to every state east of the Mississippi, and some travel as far as the Pacific Coast.

Men Behind the Product

The conversion of the Washburn potato processing operation from failure to success is, as with all such ventures, the product of a capable and dedicated management organization—and, in this instance, of one composed almost entirely of local people.

Harry Umphrey, the leading spirit in the enterprise, was born in Washburn, is descended from some of the earliest settlers, and is a product of the local public schools. In addition to being chairman of the board and sales director of Taterstate Frozen Foods, he also is president of Aroostook Potato Growers and of Eastern Growers, treasurer of Grand Island Starch Co., and a director or official of various other business concerns. He was the first chairman of USDA's National Potato Advisory Committee, holds an honorary LLD degree from University of Maine, and has many other evidences of his services to industry and to agriculture.

Edmund J. Rollins, general manager, was born in Boston, Mass., was graduated from University of New Hampshire, served as a major in the U. S. Army during World War II. He then became traffic manager for Aroostook Potato Growers prior to assuming his present duties.

Other key officials include:

Sherwood Kelso, office manager, with Taterstate since 1946.

Donald E. Langley, production manager, with Taterstate since 1949.

Mrs. Norma Langley, food technologist, who worked for both McCormick and Maxson, the previous plant operators.

Lewis W. Cole, freezer engineer, who came to Taterstate after attending a school of refrigeration at Lewiston, Me., 12 years ago.

Linwood W. Peary, traffic manager, who came to Taterstate 11 years ago after teaching school and being assistant treasurer of Washburn Trust.

Employee Relations

Taterstate's officials take a personal interest in each employee, doing everything to promote his health and welfare. A non-profit cafeteria is maintained for the staff. A completely-equipped first aid room is provided on the premises, and workers have a company insurance plan of exceptionally wide coverage. Parties and dinners are given several times a year, and at Christmas each employee receives a plum turkey. In cases of long illness, staff members have received pay checks long after insurance coverage has expired, and many baskets of food and groceries have found their way into their homes.

For the entire industry, the growth of processed potatoes has been exciting. Back in 1948, when Harry Umphrey reopened his plant, the entire production of processed potato products used only 12 million bushels a year or so. Most of this was for potato chips. By 1958, after a booming decade of growth, the production of frozen potato products alone was approaching 12 million bushels a year.

For all processed potato products in 1958, the figure was around 100 bushels—approximately one-fourth of the annual potato crop.

When I look at Taterstate, I seem to see a living testimonial to the courage and perseverance of H. E. Umphrey. My town needed an industry, and he found a way to provide one. People needed employment, and again he was the means of offering it. We in Washburn believe that Taterstate will continue to grow bigger and better, and that the children and grandchildren of the present workers will find pleasant and gainful employment there.

FOOD CRYSTALS pour easily immediately after removal from the deep freeze. Taste, to inexpert palates, still retains a hint of drying technique.

EACH FAMILY OF FOODS has it own color. While fruits have pink boxes and meats are brownish, the same design on the package keeps strong resemblance between families.

General Foods Tests New Baby Food

Consumers in Watertown, N. Y. just add water to food crystals in laminated aluminum pouches

With no fanfare, last month, a line of dry-frozen baby food was introduced in food stores in Watertown, N. Y., by Birds Eye Div. of General Food Corp. But it didn't stay quiet long.

The new line of baby food is an abrupt departure from the conventional products in glass and tin. While General Foods Corp. is reserving its decision on the success of the Watertown test, a quick check by CANNER/PACKER found a half-dozen families—out of a half-dozen who had tried it—that had switched to the new product.

COLORFUL CARTONS have tear-strip opening, two-ply bleached food board. Formulas appear conventional: strained apples and apricots contain apples, apricots, sugar and tapioca.

A General Foods Corp. spokesman said that the introduction of the full line of baby foods would not be introduced nationally "within the year," even if the Watertown test is successful. He indicated that it would take at least this long to establish production volume and open distribution channels.

The baby food line includes meat, vegetables, fruits and desserts. The foods are cooked first and then dehydrated to the point where crystals are formed. The crystals are filled into a new pouch made from a three-layer lamination of paper-aluminum film. Four pouches are packed to a carton made by Container Corp.

Biggest selling points being used by Birds Eye are nutrition and convenience. The new dehydrofreezing process is able to retain more of the natural food values, according to the full-page advertisements that appeared in the Watertown Daily Times, to kick-off the first week-end sale on April 30.

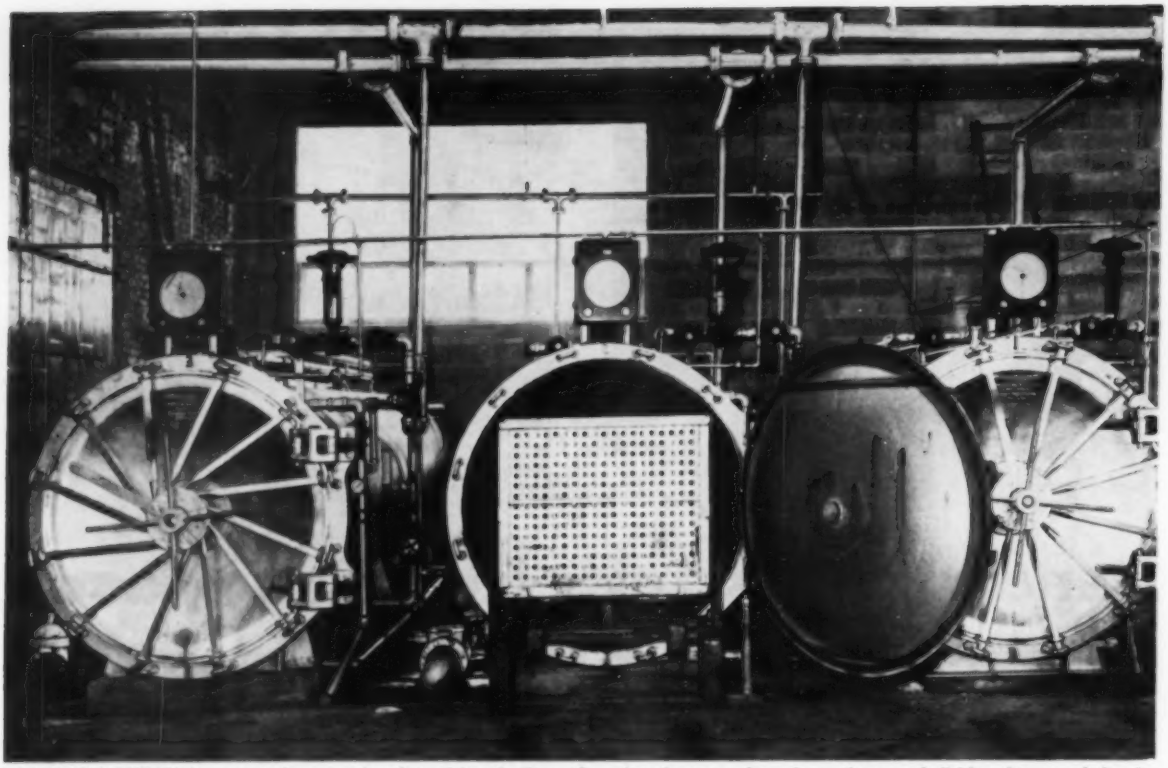
The convenience is based on easier storage, easier mixing.

The carton with four pouches sells in one Watertown chain store for 2 for 49c for the fruits, vegetable and soup items and 39c for the meat dinners. Prices vary in town. According to General Foods, the average is 2/45c and 37c. Using either figures, the dry-frozen baby food costs slightly more per meal than does the conventional baby food. Each pouch, when it is rehydrated makes one meal. A single can or jar, selling from 10c to 12c holds two meals. Thus, the cost per meal would be 5-6c for conventional baby food and 7-8c for the dry-frozen baby food. (However, prices of conventional baby foods dropped fast in Watertown when the Birds Eye product was introduced. One store offered six jars for 49c or 4c a meal.)

There are 17 items in the new line. Fruits, in pink boxes, included applesauce, apples and apricots, pears and apples, peaches, pears. Vegetables in green boxes, include green beans, white potatoes, creamed spinach, squash, carrots, peas. Soups in blue boxes include vegetables with chicken, vegetables with beef, vegetables with bacon. High-meat dinners in beige boxes include beef with vegetables, chicken with vegetables. Dessert is vanilla pudding in a yellow box.

Boxes of baby food are frozen after packaging and are kept at low temperatures. In Watertown they are sold from frozen food cases. Consumers are told that the baby food may be kept "indefinitely" in cold storage and as long as a month in a refrigerator at above-freezing temperatures.

The boxes do not need to be thawed before using.



HORIZONTAL RETORTS have vents for every few feet of length. Time of venting, however, depends on the use of divider plates, and the design of the particular retort.

Canned Food Retorting — Why & How

By Committee on Retort Equipment & Operations
National Canners Assn.

Processing of canned foods is a familiar operation, and one that looks simple on the surface. However, it involves some principles that are not always fully realized but which must be observed if the process is to be properly carried out. And proper processing is vital if one is to maintain quality, avoid economic loss through spoilage, and retain the confidence of the industry's customers. It seems worthwhile, therefore, to review here some of the less obvious but extremely important factors that determine the success or failure of a process.

To begin with, all raw food products contain various forms of bacteria. Unless controlled, most of these bacteria are capable of growing in the canned food and spoiling the product. It is well known that these bacteria can be destroyed by an adequate heat process.

Sterilizing

In canned food processing two main types of bacteria must be considered. First, there are those bacteria which may merely grow and cause spoilage that is relatively harmless and results in economic loss only. Secondly, but most important, are those bacteria that, if allowed to grow in foods in an airtight container, produce deadly by-products or toxins, which if consumed could result in death or very serious illness. This heat-resistant, toxin-producing organism, known as *Clostridium botulinum*, is commonly present in the soil in which foods are grown. It is therefore obvious that cooking, processing, or retorting must be sufficient to kill this organism. Many canners are not sufficiently aware of the danger from this type of spoilage.

To process properly the canner must know and use the required processing times and temperatures, have proper equipment, and operate this equipment correctly.

The determination of proper processing times and temperatures is a complex operation. Most canners are not equipped to do this themselves. However, these facts have been determined by the National Canners Association Laboratories and other affiliated organizations. The recommended cook times have been established to insure sterility while still maintaining quality. Often it is necessary to tread a narrow path between success and failure. Failure may result from either the use of improper equipment or incorrect operation of satisfactory equipment.

It is general practice to process vegetables in retorts in steam under pressure in order to obtain temperatures higher than 212°F. The N.C.A.-recommended processes were estab-

Committee is composed of these representatives: D. V. Alstrand, American Can Company; J. H. Bock and Lawrence Newsome, Continental Can Company, Inc.; Ralph A. Smith, Crown Cork & Seal Company, Crown Can Division; Donald L. Schott, Food Machinery & Chemical Corp., Canning Machinery Division; E. C. Grab, Jr., Heekin Can Company; Harold F. Troeger, National Can Corporation; G. R. Bee and J. M. Reed, National Canners Association.

lished by cooking in "pure" steam. Consequently, it is essential to have the same "pure" steam conditions when cooking commercially. "Pure" steam means steam with no air present.

Before the steam is turned on, much of the retort space is occupied by air. To eliminate this air you must literally blow it out with steam. This is called *VENTING*. Do not confuse venting with bleeding. Bleeds are the small petcocks usually located on the cover and thermometer pocket. They serve to eliminate small amounts of air that enter the retort with the steam, and also create circulation in the thermometer well.

Equipment

In order to vent properly, correctly installed and operated equipment must be used.

What constitutes correct installations?

1. Steam supply must be adequate. Steam pressure in the cook room main should be not less than 90 psi. at all times during operations.

2. The steam inlet to the individual retorts must be large enough to provide for venting the retort in a reasonable time. A 1″ pipe size is minimum.

3. Steam spreaders are necessary. These are pipes with a series of holes to distribute the steam and eliminate entrapped air during venting. *Baffle plates must not be used.* They create and protect air pockets.

4. Vent openings must be large enough to eliminate the air during the come-up period. These lines should be at least one pipe size larger than the steam inlet, and gate valves must be used. The lines must be open to the atmosphere or into a manifold. There must be no possibility of back pressure in the line.

5. Thermometers are the basic reference for the c o r r e c t processing temperature. It is imperative that they be accurate, dependable, and easily seen by the operator. They should be checked for accuracy at least once a year against a standard instrument. The range should be 170° to 270°F., with scale divisions not greater than 2°F. Up to now, only mercury-in-glass thermometers have met all requirements for accuracy and dependability.

6. Pressure gauges graduated in 1 lb. divisions and having a range to 30 lbs. and a minimum diameter of 4½″ are recommended. These gauges should be checked at least once each year. The gauge should be connected to the retort by means of a gauge siphon or goose neck.

7. Automatic control equipment is necessary. The equipment should control the temperature within a range of 1°F. The controller must be adjusted to agree with the thermometer.

8. Valves on the air and water lines must be kept in good condition so there is absolutely no leakage into the retort during the process.

9. Safety valves of adequate capacity are necessary to prevent excessive pressure in the retorts.

10. Retort baskets and separator sheets should have enough openings so the steam can flow freely throughout the entire load.

Procedure

Proper installation of suitable equipment, and information on correct cook times and temperatures are not enough, however. Cook room operators must be carefully selected and must fully understand the importance of operating the retorts correctly. They must be instructed in the operation and willing to follow these instructions. This is a management responsibility. Management should not burden the operators to the point that they cannot fulfill their duties properly. An additional responsibility of management is provision of reasonably comfortable working conditions through ample ventilation.

Good processing practices entail the following:

1. The cans should be processed without delay after closing.

2. All air must be removed during the venting period so as to obtain "pure" steam. No single venting specification is entirely applicable to all retorts. For a standard vertical retort a minimum suggested requirement is that the vent valve be kept *wide open* until the thermometer reaches at least 220°F. and open for not less than 3 minutes. When separator sheets are used between the layers of cans, longer times to higher temperatures are required for adequate venting.

3. Process timing is started only when the thermometer reaches the specified processing temperature. This time period must be accurate and in accord with the suggested schedules. Timing devices are available which will assist the operator in accurate time control. As pointed out previously, the temperature should be controlled within a range of 1°F. of the specified temperature.

4. Following the cook, the product should be cooled promptly to an average temperature of 100°-105°F.

Due to many variations in piping and retort sizes, specific details regarding installation, venting, and other operations cannot be covered in this brief discussion. Further information is available from any member of the N.C.A. Committee on Retort Equipment and Operation and in the reference publications listed below:

Heat Penetration

Heat penetration in canned foods containing freely flowing liquid is mainly by convection currents. The general trend of these currents is in a vertical direction, consequently in the product being heated they seek channels which permit such motion. Where their progress is impeded or baffled by solid material, the currents flow around the obstruction to the nearest point at which they can pass. For this reason, the alignment of certain foods in the can is of the greatest importance as regards heat penetration.

Where the packing or filling of any product in the can results in stratification, the cans should be processed in such position that the plane of stratification is vertical.

In the case of asparagus, for example, the spears are generally parallel and tightly packed in the cans in a vertical position, so that the channels containing liquid are parallel to the spears. As a result the speed of heat penetration is greater when the cans are placed upright in the retort.

—Introduction to NCA Bulletin 26-L. Processes for Low-acid Canned Foods in Metal Containers.

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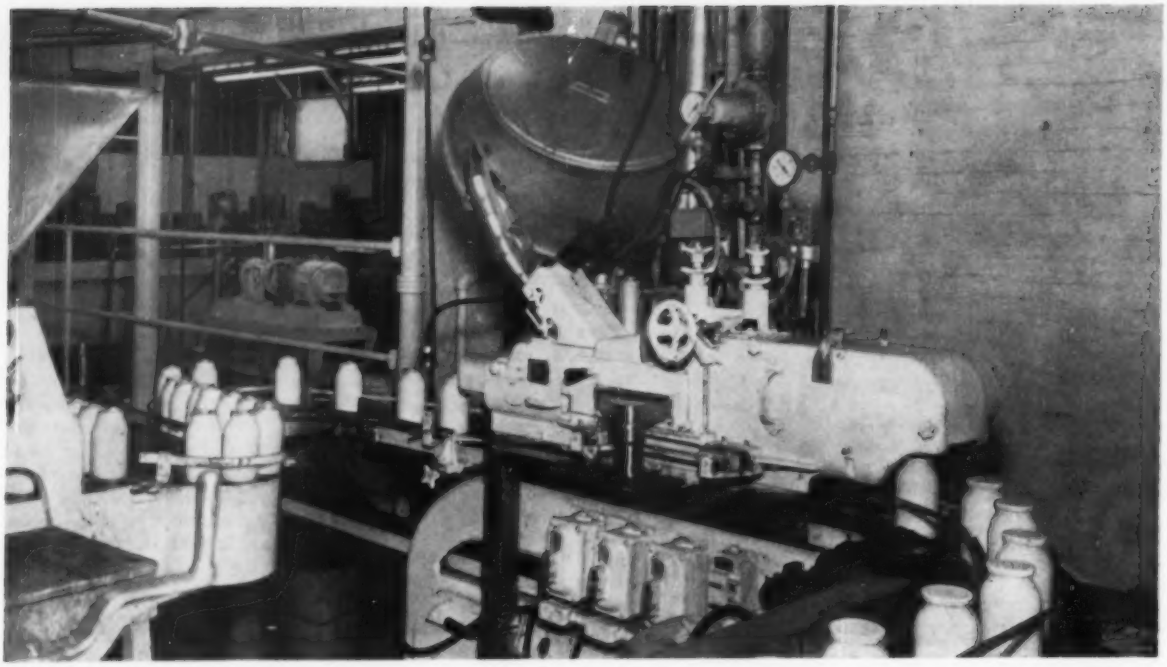
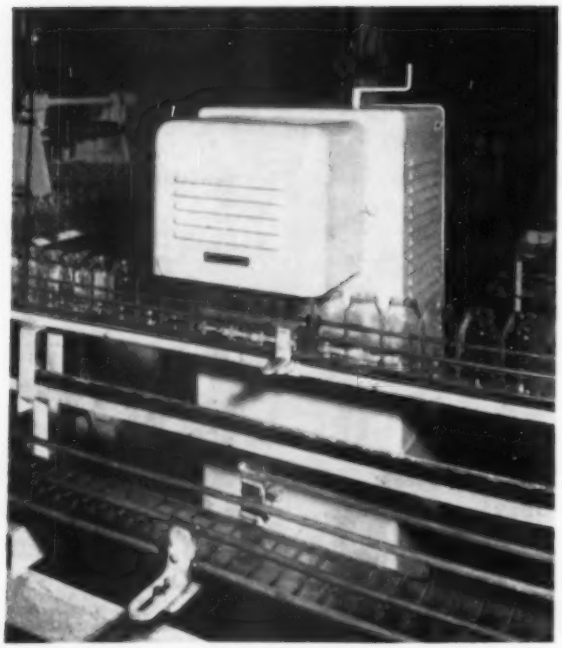


JARS FROM FILLER enter the capping machine. The new cap is applied under four inches of pressure by the White Cap capping machine.

Longer Shelf Life for Mayonnaise

New cap at J. L. Read Foods, Inc., Streator, Ill. speeds up production line and doubles shelf life for mayonnaise



BEFORE FILLING jars pass under a White Cap air cleaner to remove dust and other foreign material.

A switch to White Cap Vapor-Vacuum sealing and the new Twist-off cap boosted packaging line speeds 200% and extended the shelf life for its entire line of salad dressings and potato salads, according to J. L. Read Foods, Inc., Streator, Ill.

J. L. Read, Jr., president of the company, reported that the change to vacuum capping was made in February, 1958. Immediate benefit was a jump in average packaging line speed from about 40 a minute with conventional screwcaps to a combined average rate of 120 caps a minute for the various shapes and sizes of glass containers used for the products, he said.

Mr. Read added that the new capping machine, easily adjusted to handle the various sized caps, reduced changeover time from about 45 minutes to 20 minutes, eliminating considerable shut-down time on the lines and waste man hours.

One of the first mayonnaise and salad dressing packers to adopt the Twist-off cap and vacuum seal for its products, Mr. Read said the new closure and sealing method had extended shelf life of the company's products.

"When we used screw caps, we had a 90-day 'pick-up' policy in retail stores," he explained. "Since switching to the new seal, we've extended that to six months and we haven't had a single complaint of leakage or spoilage."

In addition to its advantages as a safe, protective seal, Mr. Read pointed out that the twist-off cap had decided consumer appeal because of its convenience.

Founded in 1948 by J. L. Read, Sr., father of the current president, Read Foods operates two plants in the Streator area, one for packing salad dressings and one for potato salads. Separation of the two operations, according to Mr. Read, was designed to permit specialization on the part of the company employees.

The salad dressing line includes three packaging lines, two for conventional sized consumer containers and a third for gallon units. Both lines for smaller packages are equipped with Vapor-Vacuum capping machines manufactured by White Cap Co., a subsidiary of Continental Can Co., Inc. A conventional screw capping machine is used on the gallon line because there is no need for the lug cap's "consumer appeal" on the larger commercial package, Mr. Read explained.

The potato salad plant includes two packaging lines, one for German potato salad and one for mayonnaise potato salad. Both lines are equipped with White Cap's cappers.

Salad dressings are packed under 4 inches of vacuum and potato salad under 14 to 17 inches of vacuum. The capping machines can handle Twist-off closures ranging in size from 27 mm to 70 mm.

Read Food products include mayonnaise, regular salad dressing, sandwich spread, Thousand Island dressing, tartar sauce, French dressing, Russian dressing, Italian dressing, Roquefort dressing, horseradish dressing, cole slaw dressing, fruit salad dressing, and the two potato salads. In addition to products sold under its own label, the company does a considerable amount of private label packing.

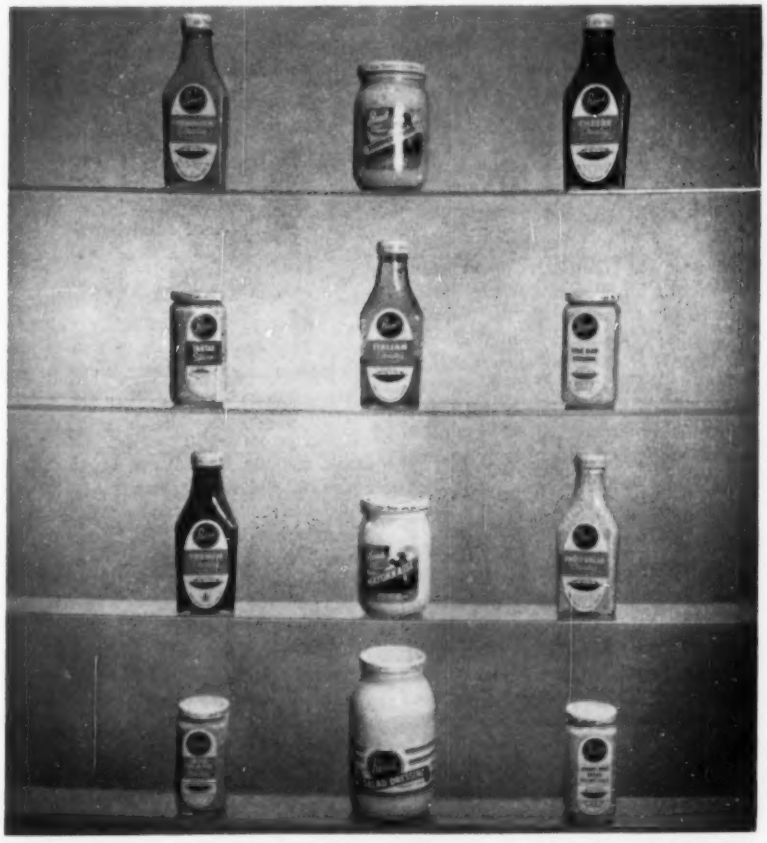
Modern Chickens

In many products such as mayonnaise, where the yellow color comes from dark yellow egg yolks, modern chicken raising practices cause problems.

Modern chickens never touch the ground. They are hatched in incubators and live in wire cages, eating by a carefully balanced formula. They don't scratch in the barnyard anymore — and, consequently, they don't lay eggs with dark yellow yolks, either. The dark yolks are characteristic of spring months when chickens —the old-fashioned kind — are consuming roughage and green plants.

The answer? Either a new roughage diet or a "back to nature" movement for modern chickens.

PACKING TABLE—Before the mayonnaise and salad dressing jars are packed in cartons, workers test the caps to be sure they are securely in place.



ENTIRE LINE of mayonnaise and salad dressing products produced by J. L. Read Foods, Inc., is now packed with the new cap.

Sweeter/Tarter Fruits Are Preferred by Consumers

California study also shows how improved methods can increase yields

Improvement in five factors can add more than 25% to the number of cases of canned fruit that a ton of raw product will produce, and will significantly increase consumer enthusiasm for the packs as well.

This is reported by Drs. Emil Mrak of University of California and Geo. Garnatz of Kroger Food Foundation.

Given a starting yield of 76.2% of what would be ideal recovery, the cases-per-ton level can be cumulatively improved by application of the five factors as follows, according to the University of California studies:

Raw material selection—ups yield from 76.2% to 80.5% of potential maximum cases per ton.

Better handling methods from orchard to plant—yield can go to 83.65%.

Efficient pitting—to 86.8%.
Proper peeling—to 93.2%.
Sugar/acid ratio—to 96.0%.

Sweeter yet Tarter

The University of California work, carried on for eight years under sponsorship of Cling Peach Advisory Board to start, and later with the support of Sugar Research Foundation, differed most from established belief in its findings that consumers would prefer canned fruit that is sweeter than present commercial levels, especially if the cut-out also is higher than customary in acid content.

This consumer welcome for a sweeter yet tarter product was confirmed in a study conducted by Dr. Garnatz through his Homemaker's Reference Committee, a taste-test panel which has proved its reliability over more than 20 years. A total of 3,857 members were sampled and polled with a variety of combinations of canned diced clingstone peaches, with cut-outs as follows:

(A) 24.24° Brix, basis soluble solids measurement of pulped peaches and syrup by refractometry; 0.297% total acidity, reported as per cent citric anhydride.

(B) 26.98° Brix; 0.277% acidity.
(C) 27.59° Brix; 0.408% acid. Citric acid at level of 0.15% added.

Is Preferred

Dr. Garnatz reports that sample C, with higher sugar and higher acid content, was significantly preferred as to flavor over either of the other samples—685 votes to 494 for the low-sugar/low-acid pack, and 595 to 483 over the high-sugar/low-acid peaches. Sample B was preferred over A for flavor.

Acceptance on the basis of appearance was less significant. The high-sugar/high-acid product was well ahead of sample B in votes—491 to 337—and moderately ahead of sample A—460 to 410. But A rated over B, and the "no preference" vote was sharply higher.

Similarly, sample C won over both B and A in its rating for eating quality, but again the differences in preference were not strong. Pack C, the high-sugar/high-acid type, rated 535 votes to 444 for type A, and 471 against 427 for type B, but "no preference" vote was relatively high.

Housewives reported to Dr. Garnatz that they would not be willing to pay 5c a can extra for the sweeter/tarter fruit, but a majority of them would select it in preference to other packs if the price was the same. The extra cost for the ingredients (basis $9.38 per 100 lbs. for sugar and $40.69 per 100 lbs. for citric acid) would have been 12c per case of 24/2½s for the high-sugar pack, 16c per case for the high-sugar/high-acid.

Harvest Maturity

A second important finding of the University of California work is that canned freestone peaches need not be tree-ripened to have top flavor and other quality characteristics.

Pears have long been harvested firm, and ripened under controlled conditions, a temperature of 68° F. and a relative humidity of 85% being considered best. Cling peaches also regularly come to canners at the just-ripe rather than the fully-ripe stage.

Now it is shown that freestone peaches picked just as the green is turning to red, at a pressure-test level of 8 lbs., can be controlled-ripened to produce a more flavorful canned product than that which has been brought to full maturity on the trees and then painstakingly harvested, transported and processed.

One problem remains, however. Freestones are not as resistant to mold as are some other fruits during the controlled ripening operation. Further studies are being made to overcome this difficulty.

Just-ripe harvesting also contributes to the profit of both grower and packer in other ways. While fruit is not fully sized in some instances, it is close to maximum. At the same time, it is sturdy enough to stand up under handling and transportation without as much damage as is the case with too-ripe stock.

Other Factors

The other factors touched on in the Mrak - Garnatz reports are better known to the industry. Picking and transportation, if handled carelessly, badly bruise the fruit, resulting on cullage losses to the growers and excessive labor expense to the canners. Bulk handling in bins, already in use by a number of the major fruit canners, is being closely watched as a possible means of helping to reduce this problem.

Improved pitting equipment, which takes away less of the flesh next to the pit or core, has reduced losses of fruit by 8 to 12%. Perhaps even more importantly, this flesh next to the stone is high in acid, and saving it contributes to the acid-sweetness balance which (see above) has been found to be so important to consumer acceptance.

Better caustic peeling of cling and free peaches also yields dividends today. Originally, halved and pitted fruit was immersed in a caustic soda solution to loosen the skins. This cut deeply into the flesh under the skin, and also into the soft tissue on the exposed pit-side, losses running to as high as 21% of the weight. In addition, the alkali caused loss of much of the acid around the pit, upsetting the acid-sugar ratio. Today the common practice is to put the halves through cup-down equipment, to spray the skins with caustic to loosen them, and then to rmeove the peel with water sprays. This technique has preserved the acid-sugar balance, and in some instances has reduced losses in weight to 5%.

How to Tell Pickle Quality — And How to Get it

Good tests are available, but first a packer needs a program

By
Prof. W. A. GOULD
Technology Editor

In the pickle business, "quality" can mean most anything. It involves some degree of purity, strength, flavor, color, size, texture, or other characteristic. But the trade generally uses the term to mean, "the finest product attainable."

To mean something, quality in a product must refer to some standard. There are standards on pickle size. Size is used as a standard not only in buying the raw product, but in fermenting procedures and in sales.

There is no real standard on color. And yet it is the most important objective characteristic of quality, in my opinion. Pickle packers have an advantage over many segments of the processed food industry because they pack in glass. The bright green color of the pickle has a terrific effect on impulse buying.

While the pickle industry lacks general standards on quality it need not handicap an individual packer. He can set up a program to control his production scientifically, according to standards of his own selection.

1—He needs a quality control department that reports directly to top management—not under the raw products department, the factory operations or even under sales.

2—He needs a man in charge of the quality control department who is a trained technologist, and who speaks and writes well, who can cooperate easily, and who can sell his program to management and to the operations staff.

3—He needs a laboratory. The old cutting room can be modified. And it need not be elaborate nor equipped with lots of fancy gadgets. The equipment should include a can opener, vacuum and headspace gauge grading scales and screens, grading trays, sizing gauges, brine and syrup cylinders and hydrometers, thermometers and special equipment for the objective measurement of quality for each product. Bacteriological equipment is necessary as well as water and waste analysis equipment.

What are the methods of determining quality? There are two basic methods that technologists use.

A subjective approach is based on the opinion of the investigator. It is used in taste panels.

An objective approach uses scientific tests evaluated with recognized standards. These include physical measurement, chemical tests and microscopic examination. In all three objective approaches the human element has been excluded.

Subjective Tests

For a pickle packer, a taste panel can be effective in using the subjective approach. A small, panel with trained members can indicate quantitative differences, and even check the standardization of a food preparation formula. In forming this sort of a panel, the members must be trained so that they can repeat themselves. The testing must be done under controlled conditions. This method, if the results ar treated statistically, becomes one of the simplest and quickest methods of quality evaluation and control. It is a "must" in any quality control program.

The USDA Grade Standards for pickles use both objective and subjective methods. Flavor, color and texture, particularly, are subjective.

Objective methods are important, but with few standards the packer has little guidance.

Physical Measurement

In physical measurements, such as color, a packer's standards must be based on his own experience and that of his competitors. The color of a pickle varies from season to season, fie'd to field, variety to variety.

Brine should be free from cloudiness, but again there is no general rule since hard water or spices may add to the cloudiness. Sediment indicates improper washing or excessive vegetable gum. Cloudiness usually indicates spoilage.

Another measurement test is the texture or crispness. Some packers are now using a Magness-Taylor pressure tester. This is a step forward. By establishing specifications, a packer will be able to keep his consumers much happier.

There are other texture devices. Ohio State University designed a texture device for snap beans. From limited studies, I believe this will give more reproducible results than a Magness-Taylor pressure tester.

Chemical Tests

A second type of objective quality test is chemical tests. There are several good and quick chemical methods that are simple and very informative of the quality of your product.

There are standard procedures for testing pH—lactic and acetic acid—salt content, sugar content, and some of the specific nutrients such as vitamins and minerals. These factors can be accurately analyzed chemically.

On these tests, there are standards. The USDA Grade standards for pickles spells out specifically the ranges of salometer and pH readings for Grades A and B.

A pickle packer should make use of these tests and flavor his product in accordance with consumer likes.

Microscopic Techniques

One other objective test of quality is in the proper use of microscopic techniques. Bacteriology is important to the pickle industry. In addition to these regular bacteriological tests, methods should be set up for detection of possible adulteration or contamination. Standard methods are available.

To summarize, there are some standards of quality recognized in the pickle industry. Size is the standard with the widest acceptance. There are USDA Grade standards that serve as an informal bench mark. There are the general recommendations of the Federal Food and Drug laws.

More standards are needed. Both industry-wide standards, and standards for control within a laboratory. Taste panels can be used effectively in a laboratory. Texture tests show some promise of supplying objective information. Chemical and bacteriological tests are available.

Grades of Apples for Processing

ANTHONY LOPEZ
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The State Horticultural Societies of Virginia, West Virginia, and of Pennsylvania, in their 1958 annual meetings endorsed resolutions stressing the need of revising the present U.S. standards for apples for processing in the direction recommended in this article. Apple processors in the three states mentioned are generally in favor of the revision.

The U.S. standards for apples for processing which are now in effect read, in part, as follows:

> "U. S. No. 1 apples shall be free from any defect which cannot be removed during the usual commercial preparation for use without causing a loss of over 5 per cent, by weight, of the apples in excess of that which would occur if the apples were perfect.
>
> U. S. No. 2 apples shall be free from any defect which cannot be removed during the usual commercial preparation for use without causing a loss of over 25 per cent, by weight, of the apples in excess of that which would occur if the apples were perfect.
>
> Culls shall consist of apples which do not meet the requirements of either of the foregoing grades."

Three Grades Plus Culls

The resolutions passed by the above mentioned societies express the opinion that the present U.S. standards need to be revised in order that the apples may be graded more accurately on the basis of quality for processing. More specifically, a large segment of the apple growers and processors of the Appalachain area believe that the maximum allowed trimming waste must be changed for the different grades so that the new grades have a smaller range of allowed trimming waste. An example of the proposed change is a system of three grades based on a maximum of 3⅛, 6¼ and 12½% maximum allowed waste, in addition to culls, instead of the present two-grade and culls system.

These changes would create conditions for more equitable pricing of apples based on their value for processing. In turn, these changes would encourage production of better processing apples by growers because the latter could obtain better prices and more profits by marketing processing fruit with a higher proportion of better stock. Higher quality processing fruit has potential for a higher price in the market.

Processors would, at first, simply redistribute the fruit dollars on the basis of the new grades. This would encourage delivery of better processing apples which, in turn, would improve the overall efficiency of the plant. When this has occurred, it will be possible for the processors either to increase the dollars paid for apples or to expand the market for apples at existing prices. The increased efficiency in processing plants comes about through higher yields of finished products with less preparation labor, when better fruit is used.

Presented by the senior author at the Conference on Deciduous Fruits, held at the Eastern Regional Research Laboratory, Agricultural Research Service, U. S. Department of Agriculture, Philadelphia, Pennsylvania, October 28 and 29, 1958.

The studies on which these recommendations are based were conducted by the Virginia Agricultural Experiment Station in cooperation with the following companies: Bowman Apple Products Co., Inc., Mount Jackson, Va.; Knouse Foods Cooperative, Inc., Peach Glen, Penna.; National Fruit Product Co., Inc., Winchester, Va.; Shenandoah Valley Apple Cider & Vinegar Corp., Winchester, Va.; The Musselman Co., Biglerville, Penna.; and The Zeropack Co., Inc., Winchester, Va.

The data obtained in the course of the research work presented here can be applied to evaluate any set of grades the industry may wish to consider.

Historical Background

Prior to the early 1930's, most of the apples that the processors received were of cider grade and were used to produce vinegar. With the loss of the export market and greater competition from other produce, the fresh apple markets began to demand higher quality apples. This emphasis on better fruit brought about changes in grade requirements for packed fresh apples, resulting in greater quantities of larger and better quality apples being thrown on the cull piles. As the latter increased, the cost of disposal mounted. Also, the loss of the export market resulted in a situation where some varieties, principally York Imperial, were no longer desired for the fresh market.

The processing industry recognized the potentialities of these culls and of the less desirable fresh market varieties. The fruit growers were interested in obtaining an outlet for cull fruit and fruit of less desirable fresh market varieties, even though the price received might be low. At first, canned apple slices were produced from the larger apples, and apple butter, apple jelly, and cider from the small fruit; vinegar was produced from peels, cores, and trim waste. Later, canned applesauce, pectin and other items were manufactured.

As consumer demand for processed apple products increased, industry requirements for processing apples exceeded the supply that the cull piles had to offer. As a result of this trend it became necessary for the processing industry to purchase apples in competition with the fresh fruit market. This change in source of supply meant that, although the unit cost of the raw material to the processors would be greater, the quality of the raw product and the recovery of finished product would be higher. After this change, many apple growers began producing their crops solely for the processing industry. The producers began to look upon the processing plants not only as an outlet for their culls, but as a new market for both the packhouse culls and tree-run fruit. Packhouse culls, also called table sorts, are sound apples but are lacking in color or other desirable fresh fruit characteristics.

Grades Set Up in 1930

The processors were now assured of a more dependable supply of higher quality apples. In 1930, U.S.D.A. Grades for Apples for Processing were established. The U.S.D.A. Grades have served the apple processing industry well during a period of great growth.

It is well known that the economic conditions in the

fruit processing industries are at present very different from what they were in the early thirties. Costs of raw products to the processors have increased, as well as other expenses such as capital investment, overhead, and operating charges. Relatively the largest cost increase, however, is that of labor. Labor in the apple processing industry is today paid about 10 times as much as it was in 1930. The changes in the costs of processing apples have emphasized the relative importance of amount of labor used and of the yield of finished products obtained in the apple processing industries. At present, in order to be able to process apples economically, it is necessary that the fruit be of better quality than was needed some 25 years ago. In other words, plant operations must be performed in less time, and yield of finished product, if possible, must be higher in order to keep costs at a competitive level.

For some years many of the apple processors, apple growers, and other persons connected with the apple processing industry, have been of the opinion that the present U.S. grades of apples for processing need to be revised in order that the apples may be graded more accurately on the basis of quality for processing. As mentioned above, the opinion of a large segment of the industry in the Appalachian area is that the percentage maximum trimming waste must be reduced so that the new grades have a smaller range of allowable trimming waste.

Research Done and Results Obtained

In 1954, the Department of Horticulture of the Virginia Agricultural Experiment Station inaugurated a research program aimed at gathering data to help establish whether or not the U.S. standards for apples for processing need to be revised, and if so, the changes that should be recommended. The work was started at the request of the Virginia State Horticultural Society. Research work was done in applesauce and in apple-slices canning lines of four Virginia and two Pennsylvania processing plants throughout four processing seasons. The study on apple processing grades was concerned exclusively with the plant operations of peeling and trimming apples, which reflect directly the quality of the fruit, as measured by trimming time, yield, and defect trim.

Experimental lots of primarily York Imperial variety apples were procured from growers ordinarily supplying apples to each plant. These apples were first mechanically sized into three classes and each size was divided into two groups. One of the groups in each size class was graded by Federal-State fresh fruit inspectors according to present U.S. standards, with the individual apples being inspected and placed in either culls or U.S. No. 1 or U.S. No. 2 grades. The apples in the other group were also individually graded according to the experimental grade standards and placed in either culls or in Experimental Grades A, B, or C. Grades A, B, and C are characterized mainly by a maximum allowable defect trim of 3-1/8, 6-1/4, and 12-1/2%, respectively. These percentage figures are 1/32nd, 1/16th, and 1/8th of the apple. The tolerances for the experimental grades were suggested by the Fruit Industries Committee of the Virginia Horticulture Society.

A sufficient volume of apples was prepared in each grade-size class to allow 45 to 60 minutes operation of the portion of the commercial plant placed at the disposal of our research group. All the apples that were processed for experimental purposes were, then, run through the plant operations in lots of one size and one grade. In commercial practice, apples are often separated into two or three sizes for more efficient processing, but the fruit is not separated on the basis of quality as there is no practical method to do it.

Normal Preparation Steps

Each lot was weighed and then the apples were peeled, cored, and trimmed following usual commercial procedures. The apple count was obtained from the semi-automatic peelers. The time required for trimming each lot was measured, as well as the recovery of: (1) peels and cores; (2) total trim waste; and (3) peeled, cored, and trimmed apples, or peeled, cored, trimmed, and sliced apples. A sample of the trim waste from each grade-size class was sorted to determine the approximate proportion of the total trim waste resulting from defect removal and from removal of peel fragments. Peel trim results from the removal of peel left by the semi-automatic peeler. Peel trim is not included in the defect trim.

Fifteen experimental lots—five grades in each of three size classes—were run through each plant in this matter. Because of the hand trimming operation was the limiting factor in the volume of apples that could be put through the production line, other operations occurring both prior to and after the trimming operation were ignored in this study.

The data obtained in the six processing plants were

Table 1—Yield of Peeled, Cored, and Trimmed Apples for Applesauce. Data obtained at Four Processing Plants, 1956-57 Season.

Size	U. S. Grades		Experimental Grades		
	1	2	A	B	C
	Percent Peeled, Cored, and Trimmed Apples				
2-3/4" and up	69.6[1]	40.1	72.4	67.8	58.5
2-1/2"—2-3/4"	65.5	36.2	68.4	63.9	54.6
2-1/4"—2-1/2"	62.6	33.1	65.4	60.8	51.5

[1]Mean of values obtained at the four processing labs.

Table 2—Trimming Time Requirements for Apples for Applesauce. Data Obtained at Four Processing Plants, 1956-57 Season.

Size	U. S. Grades		Experimental Grades		
	1	2	A	B	C
	Man-minutes per 100 Pounds Fresh Apples				
2-3/4" and up	24.32[1]	68.60	19.25	27.73	41.52
2-1/2"—2-3/4"	29.61	73.89	24.54	33.02	46.81
2-1/4"—2-1/2"	33.69	77.97	28.62	37.10	50.89

[1]Mean of values obtained at the four processing plants.

Table 3—Yield of Prepared Apple Slices. Data Obtained at Four Processing Plants, 1957-58 Season.

Size	U. S. Grades		Experimental Grades		
	1	2	A	B	C
	Pounds per 100 Pounds of Fresh Apples				
2-1/4"—2-1/2"	55.73[1]	36.93	57.48	54.54	48.67
2-1/2"—2-3/4"	59.54	40.74	61.29	58.36	52.48
2-3/4" and up	62.10	43.30	63.85	60.91	55.04

[1]Mean of values obtained at the four processing plants.

Table 4—Trimming Time Requirements for Apples for Apple Slices. Data Obtained at Four Processing Plants, 1957-58 Seasons.

Size	U. S. Grades		Experimental Grades		
	1	2	A	B	C
	Man-minutes per 100 Pounds Fresh Apples				
2-1/4"—2-1/2"	36.16[1]	57.71	34.14	37.50	44.24
2-1/2"—2-3/4"	29.76	51.31	27.74	31.10	37.84
2-3/4" and up	20.09	41.64	18.07	21.43	28.17

[1]Mean of values obtained at the four processing plants.

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statistically analysed. The statistical methods used were discussed in articles already published or in process of publication (1,2,3). The discussion presented here is based on results obtained from the experimental work outlined above. Tables 1, 2, 3, and 4 contain some of the data upon which the results of this work are based.

Narrower Waste Tolerances

Present U.S. grades for apples for processing allow quite large ranges in waste caused by removing defects left after a normal peel and core are removed. In the U.S. No. 1 grade this range is 5 per cent (0%—5%) while in the U.S. No. 2 grade the range is 20 per cent (5%—25%). The range in the U.S. No. 1 grade is sufficient to cause a variation in trimming time of as much as 10.7 minutes per 100 pounds of fresh apples and a variation in yield of as much as 7.36%. The range in the U.S. No. 2 grade is four times as great as in the U.S. No. 1 grade and would have an effect on variation in trimming time and yield four times as great as the effect in the U.S. No. 1 grade. These differences in percentages and in minutes may, at first sight, appear to be unimportant. However, when the thousands of manhours and the thousands of tons of fruit used in each plant each season are considered, the importance of these differences becomes apparent.

The experimental grades A, B, and C narrow the range of trim waste within a given grade, thus reducing the range of variation in trimming time and yield that can occur in a given grade class. We found that the reduction in trim waste allowance in the top grade from 5% to 3-1/8% reduces the maximum variation in trim time due to effect of trim waste from 10.7 minutes to 6.7 minutes per 100 pounds of fresh fruit. The maximum variation in yield is reduced from 7.36 to 4.6 per cent. In the second experimental grade, having a tolerance of 6.25 per cent, the maximum variation in trimming time and yield is the same as for the first grade. For the third grade, having a maximum tolerance of 12.5% trim waste the maximum variation is two times as great as for the first and second experimental grades. There are reasons also for the above mentioned range of values not being too small.

The experimental grades more nearly compensate growers of apples on the basis of the value of the apples to the processor. In order to comparatively test the effect of the two grade systems on grower returns for apples of different qualities, 38 loads of apples coming in to the processors (approximately 200 bushels per load) were first sized and then graded by Federal-State fresh fruit inspectors into grades U.S. No. 1, U.S. No. 2, and culls, and then regraded into grades A, B, and C, and culls.

Sixteen tree run loads having 75% or more of the apples by weight falling in U.S. No. 1, size 2-3/4" and up, were taken as representative of better quality apples (lot I). Fourteen other tree run loads having less than 75% of the apples in grade U.S. No. 1, size 2-3/4" and up, represented lower quality fruit (lot II). Eight loads of drop apples represented poor quality fruit (lot III). All the apples in the three lots were classified on the basis of size, and of present and experimental grades, and the percentage of fruit of each size and grade in each of the three lots was determined.

Table 5—Comparison of Weighted Average Prices for Three Different Lots of Apples Under U. S. and Experimental Grades Using Quoted Prices and Calculated Prices.

Lots	U. S. Grades		Experimental Grades
	Dealer	Calculated	Calculated
Lot I	$3.21	$3.21	$3.33
Lot II	2.79	2.78	2.89
Lot III	1.94	2.33	2.31

Grower Returns Change

With Lots I and II, graded on the basis of the present grades, U.S. No. 1 and U.S. No. 2, the weighted average price for the lots was essentially the same whether the dealer prices or the calculated prices were applied as shown in Table 5, columns 2 and 3. The Lot III calculated weighted prices were considerably higher than the dealer quoted price because the dealer did not buy drop apples on the same price schedule as he bought tree run fruit. When the calculated prices were applied to the distribution of apples resulting from the proposed new grades (Table 5, column 4), Lot I weighted average price was raised 12 cents per hundred pounds. The weighted average price of Lot II was raised 11 cents and in Lot III it was lowered 2 cents. The directional changes in weighted average price, when apples were graded on the basis of the proposed grades, were in a direction that would create conditions for more equitable pricing of the apples based on their value as processing apples. The production of higher quality apples would, then, be encouraged.

Table 6—Dealer Prices Versus Calculated Prices Based on the Dealer Quoted Price for U.S. No. 1 Apples, Size 2-3/4" and Up, U. S. Grades.

Grade and Size	Quoted		Calculated
	Tree Run	Drops and Table Sorts	
U.S. No. 1			
2-3/4" and up	$3.50	$2.75	$3.50
2-1/2"-2-3/4"	2.50	1.90	2.85
2-1/4"-2-1/2"	1.50	1.25	2.36
U. S. No. 2			
2-1/4" and up	1.00	.75	0[1]
Culls	.75	.75	0[1]

[1]Apples in the U.S. No. 2 grades were not worth the cost of processing.

Prices quoted by a processor in 1955 were as shown in Table 6, columns 2 and 3, and are based on the U.S. No. 1, 2-3/4" and up price quoted by the processor. The calculated prices were arrived at by using mathematical equations which were developed on the basis of the experimental work presented here. The purpose of these equations is to determine the relationship that exists in the values of apples of different grades and sizes to the processor. The derivation of these equations is explained in other articles (1,2,3). Although the calculated price differentials for size were much less than the dealer differential, the apples of U.S. No. 2 quality were of no value under the calculated pricing system, while they were paid for under the dealer pricing system.

Suggestions on Sampling Improvements

A means of determining the prices the processors can afford to pay for apples of a certain quality and size, based on their value to processors is presented here. However, more satisfactory methods of determining the actual quality of the fruit as it comes to the processing plant are needed.

Various sampling procedures are now used for determining grade and size of growers' fruit. Most commonly, a predetermined number of field containers is selected at random from the grower's load during the unloading process. The containers are designated by the inspector or by plant personnel working under his supervision. The fruit in the sample is then inspected, one fruit at a time, and placed in its proper grade and size classification.

For instance, an apple judged by the inspector to have less than 5% waste in addition to normal peel and core waste would be placed in grade U.S. No. 1, and furthermore would be sub-classified according to its diameter.

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Where a plant is buying on the basis of 2-1/2 inches and up, all apples not passing through the 2-1/2 inch ring would be placed in the highest classification bin, those that passed through the 2-1/2 inch ring but would not pass through the 2-1/4 inch ring would be placed in a lower class bin, and the remainder would be placed in cider.

After the sample had been inspected, the various portions are weighed and related to the original weight of the sample. These resulting percentage figures are then applied to the weight of the net load sampled to arrive at the basis of payment for the load. Assuming for the moment that the sample taken is entirely representative of the load being sampled, the present system is inadequate to serve as a basis of payment. Actual size of apples vary greatly even within a 1/4 inch in diameter size range, and according to results obtained from our research these differences are sufficient materially to affect costs of processing. The variation that in this study was found to occur within the small size classification of apples for slices, for instance, would account for 1.89% variation in yield of prepared product.

There was a maximum spread of 79 apples per 100 pounds. In the medium size classification, yield would vary by as much as 2.92% due to size as there was a 103 apple per 100 pounds spread within the size. For the larger apple class the variation in yield due to size variation within the class was as much as 1.54% with a maximum spread of 104 apples per 100 pounds in the class. Trimming time requirements could have varied by 4.21, 6.67, and 3.76 man-minutes per 100 pounds, respectively due to the variation that occurred in number of apples per 100 pounds.

Size Measurement Modification

It is apparent that if a finer measuring stick in purchasing processing apples is to be adopted, some modifications of size measurement is necessary. We propose a counting of the fruit in the inspection sample, dividing this count by the weight of the sample, and multiplying the result by 100. These calculations produce the number of apples per 100 pounds in sample. Some arbitrary apple count per 100 pounds could be selected as a base with premiums and discounts set up for deviations from the base.

The extent to which present samples reflect the quality of the load of fruit is unknown. Some means should be developed for making a continuous random sample of the entire load during the unloading process. Not only would it produce a more representative sample, but it would require a smaller sample, thus making the inspection job more efficient. In some plants a system of intermittent diversion of apples from the elevators during the unloading period by manual control of diversion gates extending onto the conveyor belt has been used. This is an improvement over the more common method of sampling, but it could be improved upon by development of a mechanical sampler that would take a greater number of smaller samplings from the conveyor. The need for improving the sampling and sizing procedures used in determining the grades and sizes of apples for processing is apparent.

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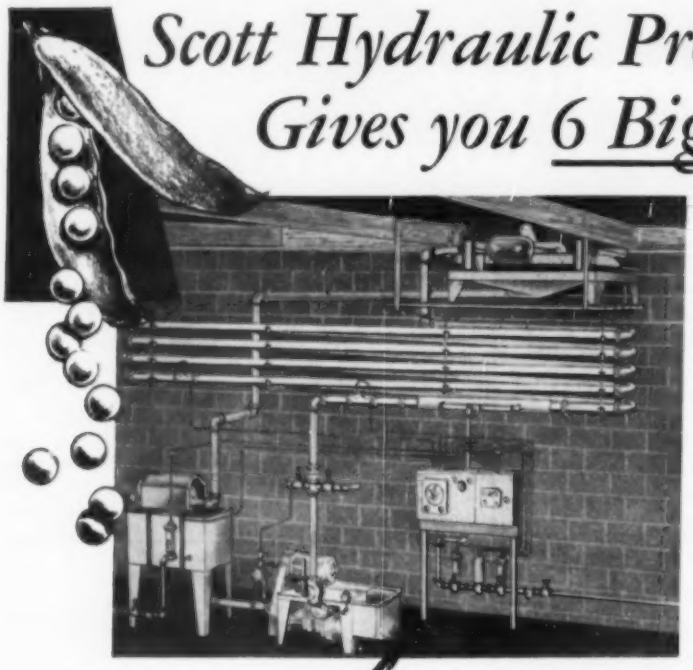


Scott Hydraulic Pressure Blancher Gives you 6 Big Advantages

1. **SANITATION:** Easily sterilized within minutes . . . no sharp corners or cracks for foreign matter to collect.
2. **FLEXIBILITY:** May be installed anywhere . . . floors, ceilings or walls! Large capacity; any length of blanch.
3. **UNIFORM BLANCH:** Commodity immersed in blanching water at all times. Sensitive air operated control, designed exclusively for the tubular blancher maintains accurate water temperature automatically.
4. **CLEANER PRODUCT:** Product in clean, running water. Sprays give final rinse. Helps remove leaf and dirt particles.
5. **SHORTER BLANCHING TIME:** Commodity is blanched under pressure resulting in shorter blanching time, better color, flavor, quality!
6. **STEAM ECONOMY:** Blancher is totally enclosed . . . steam cannot escape; starting time reduced to minimum.

The Scott Hydraulic Pressure Blancher gives you the things important to economic operation and a high quality product. Time tested and approved through years of service in plants everywhere. *Write today for complete information and detailed literature.*

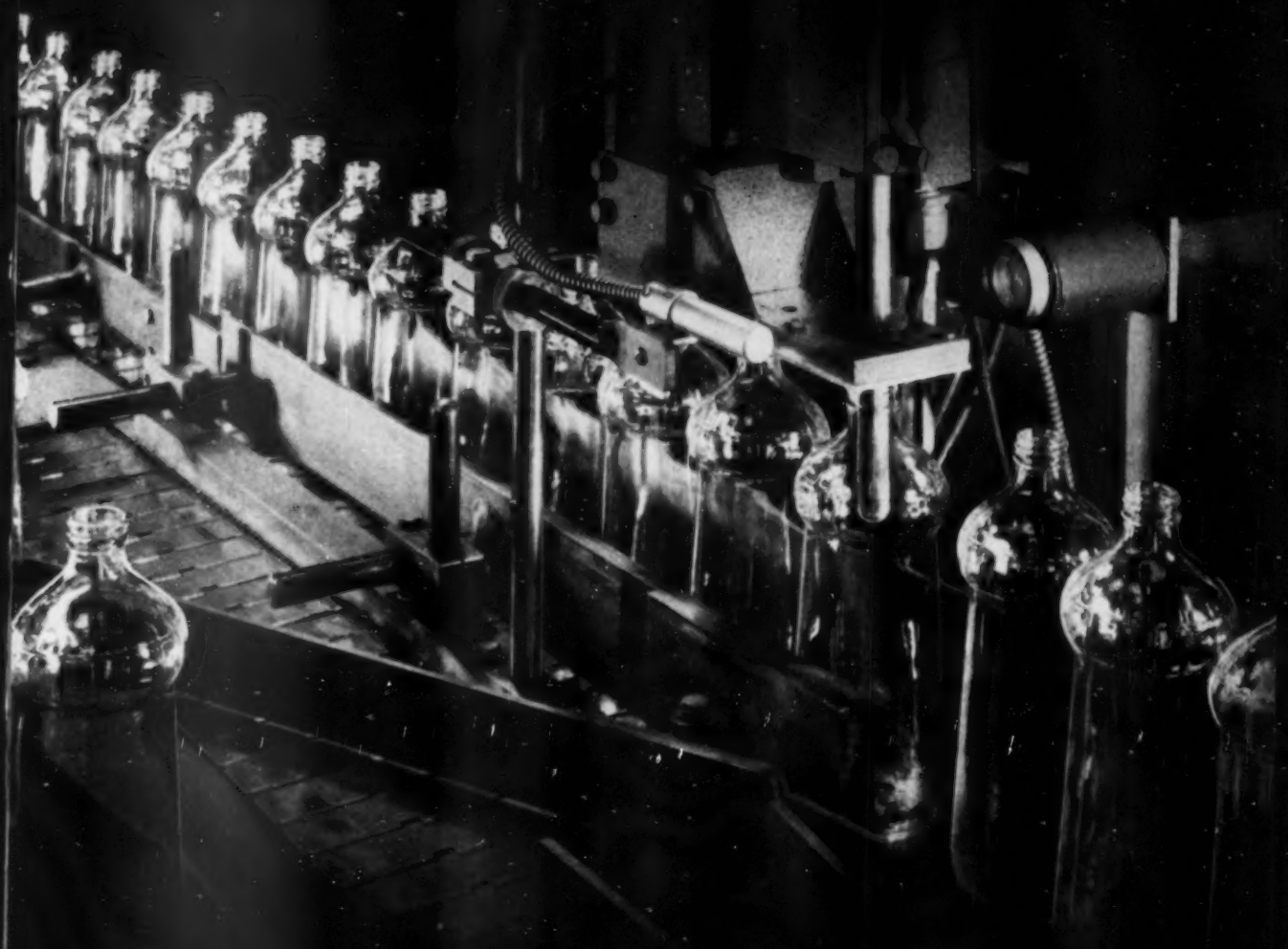
THE Scott Viner COMPANY

1224 KINNEAR ROAD, COLUMBUS 8, OHIO

One more reason* why you should

call **Ball** *first*

GLASS CONTAINERS
FOR METAL CLOSURES
PACKAGING COUNSEL



*Ball automatic throat gauges, triggered by ever alert electric eyes, can eliminate bent filling tubes and costly line stoppages in your plant. Shining Ball bottles and jugs are individually checked by these untiring machines. If the closely calibrated plug gauge encounters even the slightest resistance, the bottle is automatically rejected... another Ball "extra"... another Ball assurance that Ball glass containers will perform dependably on your filling line.

BALL BROTHERS COMPANY, INC., Muncie, Indiana; Okmulgee, Oklahoma; El Monte, California. *Represented in major cities throughout the United States.*

FROZEN FOODS

1959 Fruit Pack Down —Small Vegetable Gain

A smaller pack of frozen fruits was produced in the United States in 1958 than that of 1957, Natl. Assn. of Frozen Food Packers reports. By regions, the final figures were as follows, in thousands of lbs. (California data from Western Frozen Food Processors Assn.):

Region	1957	1958
Northeast		
Total	91,523	97,329
South		
Total	26,720	39,692
Midwest		
Total	160,422	100,438
West		
California	196,188	212,219
Wash.-Ore.	182,511	156,215
Other	14,010	4,494
Total	392,709	372,928
GRAND TOTAL	671,374	610,387

By major container classes, the 1957-58 fruit packs were as follows, thousands of lbs.:

Containers	1957	1958
20-oz. and under	180,813	163,759
10-lbs. to 20-oz.	34,561	39,965
30-lb.	359,960	322,829
Other over 10-lb.	54,854	47,115
Barrels	41,186	36,719
GRAND TOTAL	671,374	610,387

By products, the fruit production of the two seasons was as follows, thousands of lbs.:

Item	1957	1958
Apples & sauce	69,225	67,407
Apricots	8,289	6,909
Cherries, red	130,571	86,195
Cherries, sweet	4,144	6,087
Grapes & pulp	15,510	20,355
Peaches	44,462	43,478
Prunes	1,333	3,589
Blackberries	19,156	13,604
Blueberries	24,446	15,982
Boysenberries	13,354	19,751
Currants	1,687	1,372
Gooseberries	163	968
Loganberries	1,275	1,464
Raspberries, black	15,122	13,104
Raspberries, red	30,365	24,463
Strawberries, whole	259,262*	76,596
Strawberries, sliced	*	184,933
Other fruits, berries	33,010	24,130
GRAND TOTAL	671,374	610,387

**Includes both whole and sliced.*

The U.S. frozen vegetable pack showed a modest gain in 1958, according to the same sources. By regions, final figures were as follows, in thousands of lbs.:

Region	1957	1958
East and South		
Total	451,390	482,873
Midwest		
Total	90,356	75,840
West		
California	274,735	277,054
Wash.-Ore.	386,727	382,020
Other	163,357*	215,457*
Total	824,819	874,531
GRAND TOTAL	1,366,565	1,433,244

By principal container sizes, the vegetable pack in the two years was as follows, thousands of lbs.:

Containers	1957	1958
10-oz.	549,120	543,360
12-oz.	39,637	37,585
Other 1-lb & under	210,212	239,494
2½ lbs.	126,483	122,890
4 & 5 lbs.	22,098	32,202
Other 10-lb. & under	67,216	62,216
30 lbs.	61,266	84,707
50 lbs.	106,599	103,588
Other over 10 lbs.	183,934	207,202
GRAND TOTAL	1,366,565	1,433,244

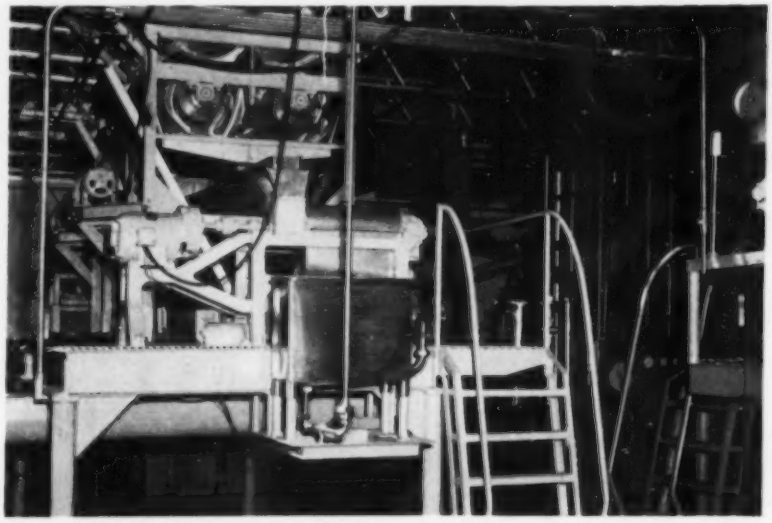
By products, the U.S. frozen vegetable outturn in the last two years was as follows, thousands of lbs.:

Item	1957	1958
Asparagus	31,201	24,365
Beans, snap	134,361	156,006
Beans, baby lima	60,736	65,461
Beans, Fordhook lima	70,644	60,449
Broccoli	80,452	109,679
Brussels sprouts	33,354	30,424
Carrots	34,237	53,713
Cauliflower	22,690	33,251
Corn, cut	112,917	111,039
Corn, cob	13,699	10,370
Kale	4,106	3,579
Mixed vegetables	41,547	37,297
Okra	17,070	15,767
Peas, blackeye	11,624	13,012
Peas, green	295,823	251,934
Peas-and-carrots	21,017	21,467

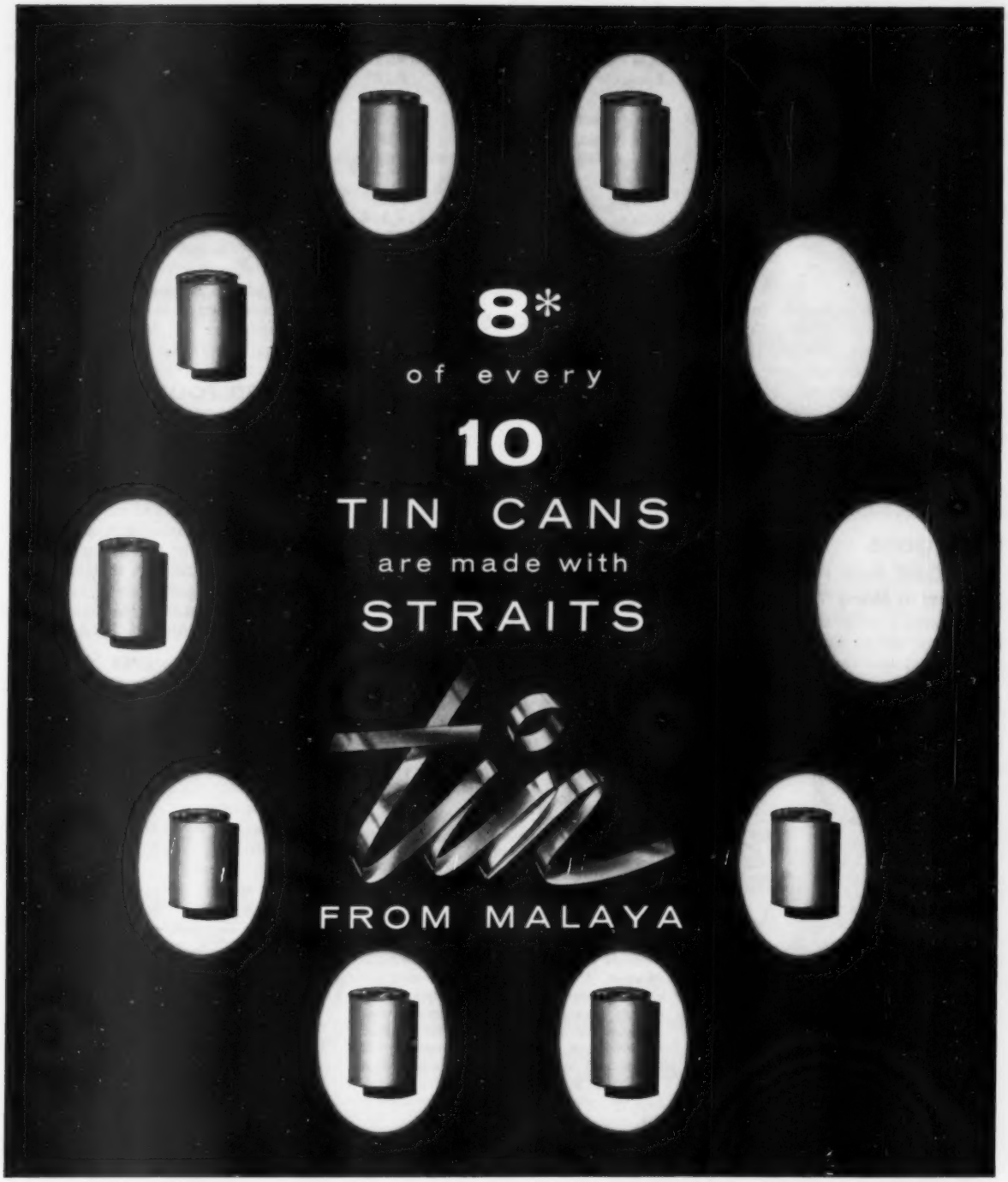
Item	1957	1958
Potatoes, French fried	189,191	231,912
Potatoes, whipped & diced	6,943	4,361
Potatoes, other	23,726	32,188
Pumpkin & squash	13,151	18,007
Rhubarb	4,704	4,449
Spinach	102,130	97,472
Succotash	10,037	8,937
Turnip greens	10,873	11,041
Misc. vegetables	20,332	26,064
GRAND TOTAL	1,366,565	1,433,244

**Includes California potato products*

Production of citrus juices, concentrates and purees, are reported for 1956-57 and 1957-58 by NAFFP as follows (data from individual packers, from Fla. Canners Assn. and from U.S. Dept. of Agriculture), in thousands of gallons:



THE FREEZE DURING THE WINTER of 1957-58 shortened the pack of citrus juice and concentrate. New techniques, better weather indicate larger production through extractors and finishers (this one is at the Florida experiment station) during 1958-59.



*Based on U.S. Bureau of Mines statistics for 1954-58 average.

THE MALAYAN TIN BUREAU

Dept. 49F, 1028 Connecticut Ave., Washington 6, D.C.

Ask us to send you TIN NEWS, a free monthly letter. It will keep you posted on tin supply, prices, new uses and applications. Write today.

Item	1956-57	1957-58
Concentrates		
Grapefruit	2,949	3,330
Grapefruit-orange	597	507
Lemon	1,691	233*
Lemonade	10,031	15,800*
Limeade	684	438
Orange	75,067	58,631
Tangerine	793	141
Total	91,812	79,080
Single-strength		
Total	1,485	1,927
GRAND TOTAL	93,297	81,007

*Estimated.

Production was primarily in Florida, except for 1,480,474 gallons of orange concentrate, 288,065 gallons of single-strength orange, and a small unreported quantity of grapefruit (both concentrate and single-strength) produced in 1957-58 in California.

In addition, packers reported to NAFFP a production in 1958 of 814,098 gallons of non-citrus concentrates and juices.

DRY FOODS

1958 Calif. Fruit Pack Smallest in Many Years

California's 1958 dried fruit output is reported by Dried Fruit Assn. of Calif. at less than 300,000 tons, smallest pack in decades. By varieties the pack was as follows, compared with 1957, in short tons:

Item	1957	1958
Apples	5,926	5,287
Apricots	7,674	2,338
Figs, merchantable	18,979	18,754
Figs, substandard	3,647	5,004
Peaches	7,770	4,739
Pears	1,911	1,104
Prunes	161,193	95,512
Raisins	159,108	158,368
Currants	3,604	3,025
Nectarines	31	17
GRAND TOTAL	369,843	294,848

GLASSED FOODS

1959 Packing Starts at Rapid Pace

U.S. glassed food packers appear to be operating at a level well above that of 1958, preliminary 1959 data indicate.

Shipments of glass food containers by manufacturers in the first quarter of this year are nearly 10% above those of the like period of last season. In thousands of gross, narrow-neck movement has been 3,397 this year against 2,826 last, according to U. S. Dept. of Commerce. Wide-mouth shipments total 9,682 in this year's quarter, and 9,076 the year before.

CY BELT says

"I can eliminate 'time lag' and speed production!"

Too often material in process can go only so far, and then must wait until somebody carries or pushes it to the next stage in the production line. The delay caused by the need for manual handling can frequently be eliminated by a *complete* conveyor system that reduces manual handling to the absolute minimum. Time is saved, unit costs are reduced, and the profit margin is widened. A trained Cyclone salesman can analyze your present materials-handling system to uncover time-wasting procedures, and suggest improvements. His analysis costs nothing, and his recommendation will be tailored to *your* plant and *your* needs. Just fill in the coupon.

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USS Cyclone Metal Conveyor Belts
Spiral Woven · Flat Wire · Flex-Grid

Prompt service to belt users is assured by two factories, one in the Middle West and one on the Pacific Coast.

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Dept. D69, 614 Superior Avenue, N.W.
Cleveland 13, Ohio

Please send me, without obligation, your catalog No. 5 on Cyclone Processing Belts.

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Company.....
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City..... State.....

Operations currently are heavily to non-seasonal items like baby foods, condiments, extracts, salad dressings and syrups, and to foods produced from stockpiled raw products, such as preserves, pickles, Maraschino cherries, green olives, peanut butter, etc.

Usage of peanuts for butter totaled over 248 million lbs. in the first eight months of 1958-59, up from just under 239 millions in the previous season.

In the seasonal field, U.S. cucumber-pickle acreage is reported at only 113,350 acres, down from the 125,990 acres planted in 1958. Principal reductions are in Michigan, North Carolina and Texas.

CANNED FOODS

1959 Vegetable Acreage Close to 1958 Level

When cucumber-for-pickle acreage, and that part of the tomato acreage destined for catsup and chili, are subtracted, the contracted acreage of nine U.S. vegetables for processing in 1959 is almost identical with that of 1957. U.S. Dept. of Agriculture figures show the following acreage to have been contracted for this year and last:

Item	1958	1959
Lima beans	88,850	90,050
Snap beans	158,600	166,700
Beets	16,460	14,830
Cabbage-for-kraut (contract)	7,950	7,600
Corn, sweet	401,740	450,950
Cucumbers-for-pickles	125,990	113,350
Peas, green	395,850	360,880
Spinach, winter, early spring	8,700	10,600
Tomatoes	360,500	308,800
TOTALS	1,564,640	1,523,760

During the ten years 1948-57, acreage for these nine crops has averaged 1,695,970. Still to come are government figures on asparagus, open-market spinach, and late spring and fall spinach, combined acreage for which has averaged 133,000 acres.

Next Month—Prices

Beginning with the July issue, Canner/Packer will introduce a new service—packers' quotations on food products. First price figures will be on selected canned foods, to which it is planned to add information on frozen, dry and glassed items in later months.

In addition to data on individual items, a series of price indexes will be developed to indicate general trends in processed food prices.

your success or failure depends on these

TWO DOLLARS

It takes careful management to keep these in the right proportion, and when you can convert an "overhead" dollar into a "profit" dollar, you have strengthened your position in today's competitive field.

For Food Processors, CANNERS EXCHANGE provides a 52-year time-tested plan to reduce insurance overhead safely. Thousands of our policyholders have saved up to 40% of the customary premiums charged by other insurance companies. In addition, they received a complete insurance and inspection service specifically planned to serve the Industry!

Only a plan which is specifically designed for the Food Processor can give so much at such little cost.

1958 Canners Exchange savings distribution	Total savings to date have amounted to
$1,366,591	$34,427,012

If you are not now a policyholder, but believe your plant is entitled to a preferred risk classification, write to:

Canners Exchange®

LANSING B. WARNER, INC.
4210 PETERSON AVENUE • CHICAGO 46, ILL.

52 YEARS OF DEPENDABLE SPECIALIZED FIRE INSURANCE FOR FOOD PROCESSORS

What Is Outlook For Aluminum Cans?

Can companies and the canning industry are interested in aluminum as a possible second metal for metal containers for security reasons, and because aluminum production is growing and there is the potential of lower prices.

Currently, products packed in aluminum cans include sardines, beer, oil and cheese. Experience with these, plus laboratory work, indicate that such cans are of adequate strength when the gauge is 35 to 40% above tinplate. The cost of such cans is equal to those made from tinplate when the gauge is identical. They can be handled in canning plants by methods similar to those used for tinplate cans, but some machines will have to be modified to avoid excessive denting and to keep the containers on the track in can runs. Also, special unscramblers for top or bottom orienting, and perhaps new runways to avoid jamming, may be required.

European experience seems to indicate that practically all food cans would have to be enameled, and that even with enamels shelf-life may be shorter when pH is below 5. Also, some colored products experience color bleaching, and some meat items are subject to sulfur-staining. Aluminum alloys vary in their corrosion-resistance, and those which offer the best food protection are usually the softest and most subject to denting and jamming.

Four types of can manufacture offer possibilities: (1) drawing, generally for short cans; (2) reverse extrusion, which has the penalty of a heavy bottom; (3) forward extrusion, which produces a cylinder without top or bottom; (4) drawing and ironing, which makes a thick can first and then "irons" it thin.

—From paper by Dr. L. P. Gotsch, Dr. K. W. Brighton and E. F. Eike, at National Canners Assn., Chicago, Ill., Feb., 1959.

Can-rusting Problem Still To Be Solved

Cans traveling coastwise and intercoastal by boat sometimes suffer from rust damage, which makes it impossible to move the merchandise in self-service stores. Research carried on for two years has thrown some light on this problem, but has not yet solved it.

Trouble occurs mainly in the winter, especially when cold cans enter a warm area like the Panama Canal. In such instances, water condenses on the surface of cans, and may remain there long enough for oxidation to occur.

Putting the cans into the warm hold is not the answer; they cool off en route. Holding down the moisture via dehumidifiers is a promising theory, but in practice too little instrumentation and too much introduction of moist new air has defeated the method. Big sea vans, holding up to 30 tons and containing only dehumidified air, are showing promise. Palletized loads afford some protection from moisture, especially if the unit is covered with a film, fibre or asphalt cape.

Coating also is being investigated, employing oils and emulsions which are applied to the cans via a fog or a dip. Certain volatile corrosion inhibitors also need study, to determine how long they are effective.

—From address by Russell C. Phillips, Stanford Research Institute, at National Canners Assn. convention, Chicago, Ill., Feb. 19-24, 1959.

How Tough Will the Frozen Food Code Be?

Nothing is going into the prepared frozen food code that hasn't been proven that it can be done. No one is asking for anything that isn't obtainable under good sanitary practices.

Probably a tentative standard for pot pies, based on a standard plate count, will be presented before the AFDOUS meeting in June. This will be the first one. There may be as many as four.

Eventually, the code will have standards for processing facilities including locations and structures of docks, ceilings, doors, cold storage, etc. It will have standards for processing equipment (pumps, valves, heat exchangers, kettles, mixers, fryers, etc.).

Not all the problems have been solved in formulating the code. Standards for gravies need more study. So do meat dicers. But the facts are established on employee hygiene. And it is clear that packers should separate the raw product operations from the frozen processing operations. Continuous operation is desirable.

The code is established for prepared frozen foods, but vegetable packers will be advised to follow the pre-cooked requirements when remodeling.

—C. S. Brinsfield, chief of the Division of Food Control, Maryland State Department of Health, and chairman, AFDOUS (Association of Food and Drug Officials of the United States) Frozen Food Standards Executive Committee, speaking at the National Association of Frozen Food Packers convention in Chicago, March 2.

What Has Happened To Tin-Glass Containers?

Major improvements are giving food packers much greater value from their metal and glass container purchases than was the case 25 or 50 years ago.

Tin-coated steel cans have been made better and more economical by such developments as electrolytic tinplate, reduction in the amount of tin used, better lacquers and lacquering, better beading, new side-seam techniques, convenience (aerosols, no-drips, reclosables), better labels (including metalized paper), faster handling and closing equipment.

Progress in glass has included such developments as lighter weight, better styling, plastic coatings to resist breakage, large "economy" sizes, better shipping methods. Closures also have undergone important changes, including introduction of twist-off vacuum caps, greater application speeds, better liners, better coating, and recently a new two-piece roll-on cap.

In the field of plastics, three interesting developments have occurred—polyethylene tubes, cans with plastic bodies and metal ends, and squeeze-jars.

—From address of Dr. Gordon T. Peterson, Continental Can Co., before National Canners Assn., Chicago, Ill., in Feb., 1959, (with Anna May Schenk).

USDA Grade Standards

Proposed Changes:

Canned Summer Squash
Chilled Orange Juice
Canned Ripe Olives
Concentrated Lemon Juice

New Standards:

Frozen Okra
Frozen Concentrates
Frozen Haddock Fillets
Frozen Sweet Peppers
Frozen Broccoli

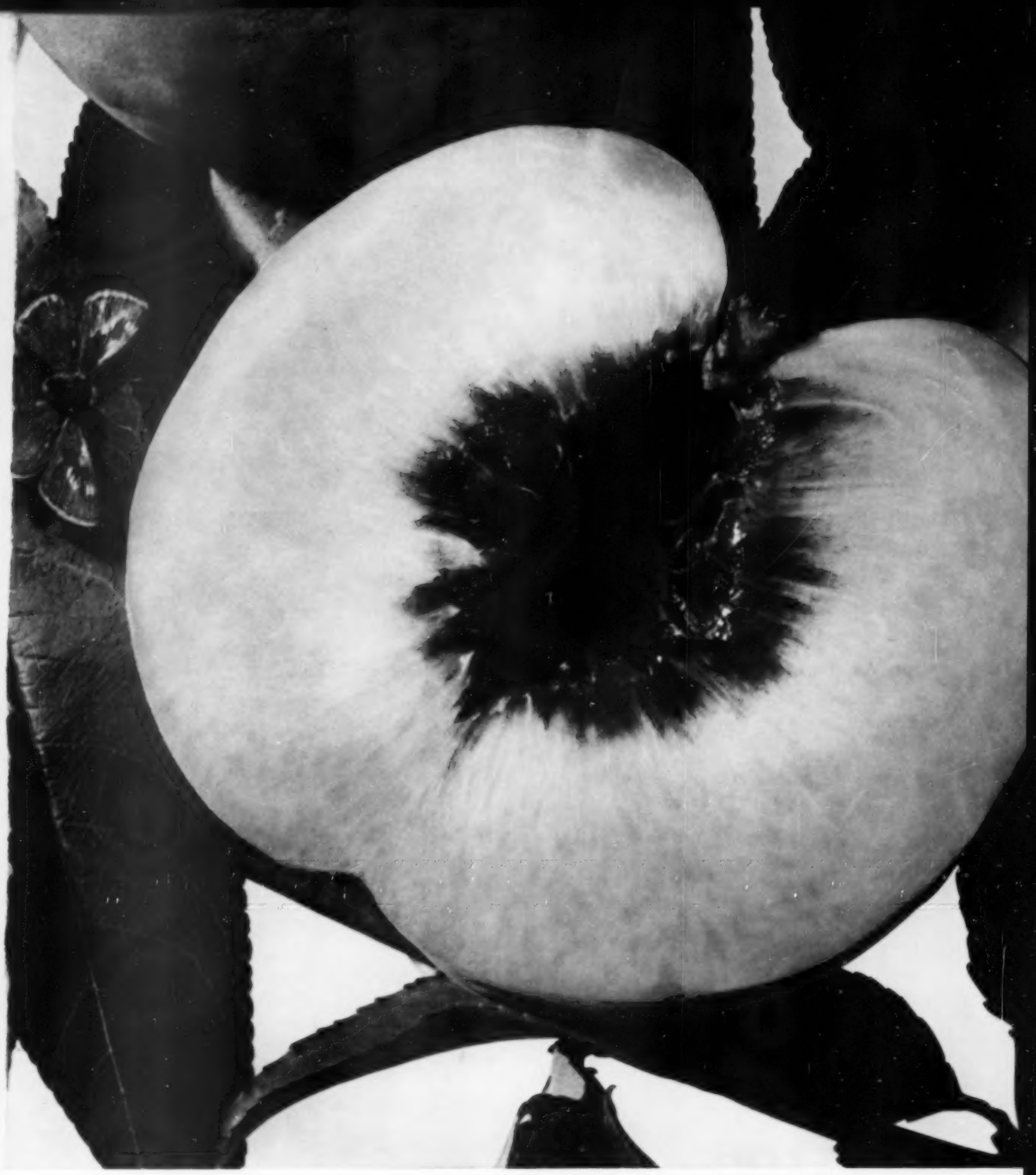
Men in the News

Roy E. Moser was named fruit and vegetable processing specialist, Oregon Agricultural Extension Service.

Dr. John N. Van Deren, Jr., has joined the staff of the Food Technology and Human Nutrition Dept., Clemson Agricultural College, Clemson, S. C., as an assistant food technologist and biochemist.

Lloyd B. Jenson has received this year's Pasteur Award according to the Society of Illinois Bacteriologists, Waukegan, Ill.

D. Robert Davis has joined the research staff of the Horticultural Products (Food Processing) Div. of the Dept. of Horticultural, Ohio Agricultural Experiment Station.



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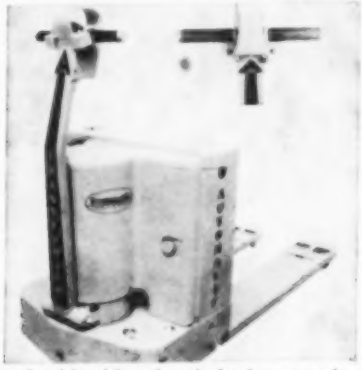
NEW EQUIPMENT/SUPPLIES

Braking Control

DESCRIPTION: A separate control provides dynamic braking for Transporter industrial trucks. Trade name: Dynamic Braking.

FEATURES: Control permits optional use of Dynamic Braking and is conveniently located for finger tip con-



trol with either hand. It does not interfere with the standard braking system.

MFR.: Automatic Transportation Co., 149 West 87th St., Chicago, Ill.

Table Conveyor

DESCRIPTION: A workbench with a built-in materials flow line. Trade name: Table-Veyor Model 1050.

FEATURES: Incorporates new construction features making it ideal for assembly, inspection, checking, sort-

ing, etc. Available in lengths from 5 to 60 ft. with belts from 4 to 24 in. in width.

MFR.: Rapids - Standard Co., Inc., 342 Rapistan Bldg., Grand Rapids 2, Mich.

Carbon Dioxide "Snow"

DESCRIPTION: Liquified carbon dioxide (CO_2) is used to chill the interior of railroad cars or trucks after loading and preserves products until the car's own refrigeration system takes over.

FEATURES: Only a few minutes are required to spray the "snow." Displacement of air in the car with the CO_2 atmosphere minimizes water condensation and helps maintain proper cooling.

MFR.: Pure Carbonic Co., 150 E. 42nd St., New York 17, N. Y.

Plastic Pipe and Fittings

DESCRIPTION: Pipe, of epoxy and fibreglass construction, and fittings can be used for transmitting fresh water, brine, vegetable and animal oils, syrups, fruit juices, etc. Trade name: Bondstrand pipe.

FEATURES: The pipe can be cut and joined in the field with no special tools. The corrosion resistant pipe, although rigid, is said to be flexible enough to follow the contour of a normal ditch and will not cold flow or sag in use.

MFR.: Amercoat Corp., 4809 Firestone Blvd., South Gate, Calif.

Industrial Gloves

DESCRIPTION: White Neoprene gloves are said to be ideal for use in poultry processing and food opera-

tions where fats, acids and caustics are handled.

FEATURES: They are light enough for laboratory use and for many types of inspection work. The exclusive Wil-Grip Firmhold Finish provides positive gripping action for any handling operation.

MFR.: Wilson Rubber Co., Industrial Div., Canton, Ohio.

Bottle Uncaser

DESCRIPTION: A full-range, half-depth bottle uncaser. Trade name: Atkron Dumore.

FEATURES: Continuous operation of conveyors controlling bottles and cases without the necessity of infeed timing. Interchangeable metal finger assemblies and infeed gate castings permit uncasing of 6 to 32 oz. bottles from 3 and 4 wide half-depth cases.

MFR.: Economic Machinery Co.,

Div. of Geo. J. Meyer Manufacturing Co., 60 Fremont St., Worcester 3, Mass.

Timing Belt Drive

DESCRIPTION: Constructed with steel cable cords running through neoprene fully molded with nylon base fabric. Trade name "Time-Tex."

FEATURES: Small pulleys, short centers, narrow belts, and high capacities space requirements. The drive makes possible a range of speeds from 0 to over 16,000 ft. per minute.

MFR.: Allis-Chalmers Mfg. Co., Milwaukee 1, Wis.

Polymer Lining

DESCRIPTION: Developed for lining wood tanks, it is made of various polymers: Polyvinyl Chloride and Polyethylene.

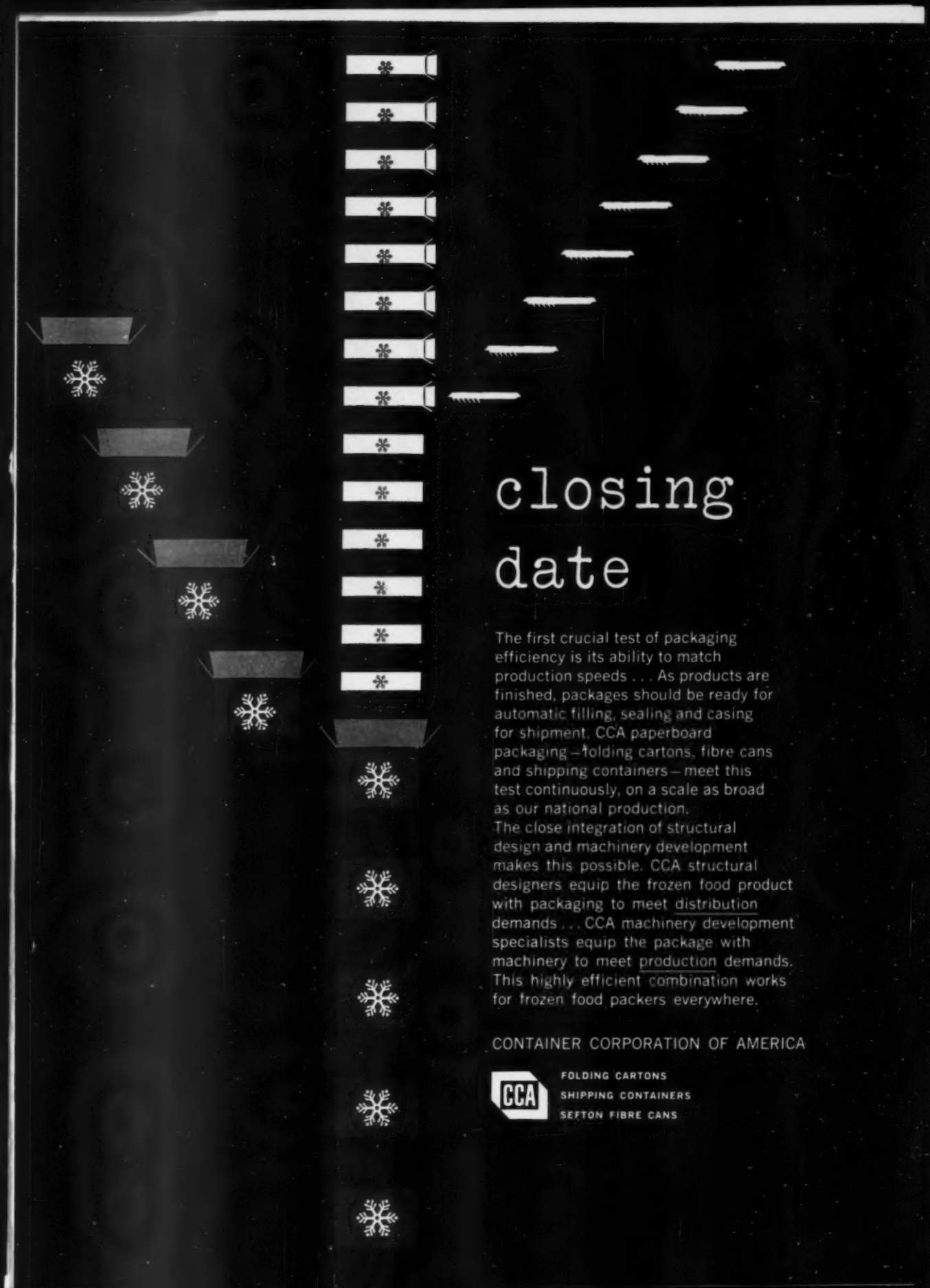
FEATURES: Said to be less costly than methods formerly used. Linings are heat sealed into a bag liner made

to fit the inside of a tank and are custom made to fit various shapes and conditions.

MFR.: Wendnagel & Co., Inc., 600 W. Cermak Rd., Chicago 16, Ill.

Circulars, Bulletins Catalogues, Brochures

Protein Uses: Booklet entitled "Zein —A Versatile Protein for Industry" describes the characteristics and uses of Argo Brand Zein G200 — Corn Products Sales Co., 17 Battery Place, New York 4, N. Y.



closing date

The first crucial test of packaging efficiency is its ability to match production speeds . . . As products are finished, packages should be ready for automatic filling, sealing and casing for shipment. CCA paperboard packaging—folding cartons, fibre cans and shipping containers—meet this test continuously, on a scale as broad as our national production.
The close integration of structural design and machinery development makes this possible. CCA structural designers equip the frozen food product with packaging to meet distribution demands . . . CCA machinery development specialists equip the package with machinery to meet production demands. This highly efficient combination works for frozen food packers everywhere.

CONTAINER CORPORATION OF AMERICA

CCA

FOLDING CARTONS
SHIPPING CONTAINERS
SEFTON FIBRE CANS

Top Brand French Style Bean Slices come from the Urschel Model "W"

Cuts on 5/32" centers

One cut at right angles thru center eliminates wide slabs

Urschel Model "W" French Style Bean Slicer

The finest, most appetizing French Style bean slices ... ready to be packed in your top-premium brand... are yours with the Urschel Model "W" Slicer, utilizing No. 4 and No. 5 sieve size pod beans.

Featured is a new feed belt designed to substantially increase the machine's capacity.

Write or call today for complete information.

URSCHEL LABORATORIES INC.
VALPARAISO INDIANA

Designers and manufacturers of precision, high speed cutting equipment for food products

Bean Insect Control: Advantages of Sevin insecticide in controlling major bean insects are outlined in a folder (F-40471)—Crag Agricultural Chemicals, Union Carbide Chemicals Co., 30-20 Thomson Ave., Long Island City 1, N. Y.

New Markets: "Expand Your Market Through Unmatched Cooking Convenience," tells how the cook-in pouch can help broaden market possibilities —Flexible Packaging Div., Continental Can Co., Mount Vernon, Ohio.

Thermutator: Bulletin G-572 describes a multi-purpose Thermutator designed for continuous processing of liquid or semi-solid products — Cherry-Burrell Corp., Dept. WJM, Cedar Rapids, Iowa.

Imprinters: Engineering data sheet gives details on the complete line of Packomatic automatic Case Imprinters —J. L. Ferguson Co., P.O. Box 1226, Joliet, Ill.

Votator Fillers: Brochure describes use of Votator piston filler for precise, continuous filling of liquid and viscous food products—Girdler Process Equipment Div., P.O. Box 43, Louisville 1, Ky.

Price Catalog: Prices, brief descriptions and general information are given on essential oils, aromatic chemicals and specialties, flavor bases, certified colors, and dry soluble seasonings—Dodge & Olcott, Inc., 180 Varick St., New York 14, N. Y.

Filling Scales: Four page bulletin describes ten main types of automatic scales and offers operational diagrams of three types of feeder action—Thayer Scale Corp., Thayer Park, Pembroke, Mass.

Protective Coatings: Bulletin No. 259 gives type and details of various coatings and lists technical bulletins covering specific applications—Wisconsin Protective Coating Corp., Green Bay, Wis.

Screening Feeders: Five standard electromagnetic vibrating Screening Feeders are described in a new catalog—Syntron Co., 1232 Lexington Ave., Homer City, Pa.

Labeling: Regulations and suggestions for required dietary labeling of enriched foods are outlined in a booklet titled, "Your Refresher Course on Enrichment"—Merck & Co., Inc., Chemical Div., Rahway, N. J.

Conveyors: "Incline-O-Belt" conveyors are described in a new 12-page portfolio of specification sheets—Sage Equipment Co., Inc., 30 Essex St., Buffalo 13, N. Y.

Make it better with Hardy CUBE Canners Salt

- Fast, even dissolving rate of cube crystals gives more uniform salt content and flavor to canned foods. Crystals do not break up, like brittle, uneven flake salt.
- No Caking. Cube form and moisture-proof bags prevent caking of salt under ordinary plant conditions.
- Requires ⅓ less storage space—not as bulky as flake salt.
- Approved purity— set by canning industry; 99.8%+ sodium chloride.
- You save up to 27c over flake salt on every 100-lb. bag, because of highly efficient production process using the only quintuple-effect evaporators in the U. S.

Write for complete information.

There is a Special HARDY SALT for any purpose

HARDY SALT CO.
P. O. DRAWER 449
ST. LOUIS 66, MO.

RAW PRODUCTS

How Isotopes Aid in Study of Insects

Mention of the atomic age commonly brings to mind the atomic and hydrogen bombs, or the use of atomic power. However, another important development of the era has been use of radio-active isotopes or compounds as tracers in the study of insects. For example:

A fig grower with large acreages near a city dump expressed considerable concern over an unusually large build-up of vinegar flies, which he thought might be coming from the dump. The orchards were located 1.3 miles upwind.

Upon examining the dump, it was discovered that over 90 truckloads of green tomatoes, covering an area equal to 1½ football fields, were present in all stages of decomposition. Heavy populations of vinegar flies were noted. We placed bait in the dump, consisting of banana and ground fig upon which radio-active phosphorus had been sprayed with a hypodermic syringe.

We then trapped vinegar flies in the orchards and, by running a Geiger-Muller tube attached to a beta-gamma survey meter over them, instant detection of "hot" flies was obtained. Recovery of tagged flies in the fig groves verified our suspicions, and more rigid supervision, or possible abandonment, of the dump is assured as a result of these findings.

—Al Yerington, U. S. Dept. of Agriculture, at Dried Fruit Assn. of California, Palo Alto, Calif., April 16, 1959.

Lack of Pollon Causes Catfaced Strawberries

Lack of pollination can cause catfaced berries as well as completely inhibit fruit formation. Some varieties are more prone to catfacing than others because the flowers produce a large amount of pollon that is not viable.

Thrips are often abundant in strawberry blossoms at the time that catfacing is a serious problem. However, it is apparent that thrips do not cause catfaced berries.

Lygus bugs are quite different. These bugs feed on the individual seeds and destroy the contents. They cause catfacing by destroying numerous seeds, but they do not cause the malformation from the toxic action of a single feeding puncture.

It is difficult to distinguish catfacing caused by lygus and catfacing caused by poor pollination. However, a population of one or two bugs per 10 sweeps should be watched with suspicion.

—William W. Allen and Stanley E. Gaede, Department of Entomology, University of California.

Yields of High Quality Peas Are Increased

Higher yields of high quality shelled green peas for canning and freezing are possible on many New York State farms. Well fertilized peas not only yield much better, but they also remain in fancy grade longer. On sandy soils the use of 500 pounds of a 10-10-10 fertilizer or its equivalent in higher analysis mixtures is recommended, with 600 pounds of an 8-16-8 on loam soils.

Chemical seed treatments have increased pea yields by as much as 50 per cent.

Peas harvested at a tenderometer grade of 91 to 95 will be most profitable where the crop goes to the freezer, while tenderometer grades of 96 to 105 will bring the best returns at the canning factory.

—Prof. Charles B. Sayre, New York State Agriculture Experiment Station, Geneva, N. Y.

One-Shot Herbicide for Vineyards

A single application of a chemical weed killer knocked out most of the weeds in a two-three foot strip in New York vineyards. There was no vine injury detectable, nor did the chemical effect the taste of the grapes.

The chemical, Karmex W, made by E. I. du Pont, does not control milkweed and bindweed. Best results are obtained when the dominant grasses are rye grass, orchard grass or quack grass.

—Dr. Nelson Shaulis, New York State Experiment Station, Geneva, N. Y.

Tomato Crop: 32 Tons

A New Jersey tomato grower topped the 25-year record of the New Jersey Top Ten Tomato Club. Viola and William A. Donald, Jr., of Burlington, were named state tomato growing champions at a recent meeting of the State Horticultural Society. Average New Jersey yield for the past 10 years has been around 8 tons per acre.

The Donalds record-breaking crop was recorded at 32 tons per acre.

The Top Ten Tomato Club is an organization of growers, with the purpose of improving both yield and quality of tomatoes grown in New Jersey.

You name it...

STANGE

will season it better!

. . . because with Stange, seasoning is both a science and an art: Science —in processing the basic seasonings: Art—in the application of these seasonings to your products to achieve distinction in their field for flavor and eye-appeal.

STANGE

TALENT TO CREATE

SKILL TO PRODUCE

FLEXIBILITY TO FIT YOUR NEEDS

WM. J. STANGE CO., Chicago 12, Ill. • Paterson 4, N. J. • Oakland 21, Calif.
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50-A MICROGROUND SPICE • NDGA ANTIOXIDANT
CREAM OF SPICE SOLUBLE SEASONING • GROUND SPICE
PEACOCK BRAND CERTIFIED FOOD COLOR

Printed in U. S. A.

NEW PRODUCTS AND PACKAGES

Rice For Gourmets

Comet Rice Mills, Dallas, Texas, has introduced a new product—Comet Rice for Gourmets—in 12 oz. packages. The product is manufactured by

a method of processing the rice while it is in its natural state. Unused portions of rice can be refrigerated and reheated several times.

Spiced Apple Rings

C. H. Musselman Co., Biglerville, Pa., has added a new "multiple use" product to its line for national distribution. The product, Spiced Apple Rings, is packaged in 15 oz. glass jars. Glass jars are by Anchor Hocking

Glass Corp., Lancaster, Ohio; twist closures, White Cap Co., Chicago, Ill. and Anchor Hocking; labels, Piedmont Label Co., Bedford, Va.

Boil-in-Bag Entrees

Fox Deluxe Foods, Inc., Chicago, Ill., has introduced a new line of Fox De Luxe A la Carte entrees in boil-in-bags. The three entrees are Sliced

Turkey with Giblet Gravy, Beef Patty with Onion Sauce and Gravy, and Sliced Beef. Because of the low height of the bags, new low height cartons are used. They are ¾ of an inch high. The cartons are reproduced by offset lithography with Marathon's Hi-Fi Glamakote finish.

Gelatin Mixes

Kraft Foods, Div. of National Dairy Products Corp., Chicago, Ill., has introduced a new line of pudding and gelatin mixes for the restaurant and institutional markets. There are six gelatin flavors and four pudding flavors. The color of each carton

identifies the flavor. Laminated Glassine liners are used in the 4-color printed cartons.

Frozen Rolls

Topco Associates, Inc., Chicago, Ill., has added frozen rolls to its Top Frost line of frozen foods. The medium-sized rolls are packaged in two-dozen quantities in heat sealed polyethelyne bags. They are separated so that they can be used in quantities as

needed. The package is made by Shellmar-Betner Div. of Continental Can Co., Chicago, Ill.

Fruit Juice Drinks

Duffy-Mott Co., Inc., New York, introduced two new fruit juice drinks to the metropolitan New York area called "AM" and "PM." The "AM" drink is a combination of orange, pineapple, apple, prune and apricot. According to the company, the drink is well fortified with Vitamin A and C. "PM" is a blend of apple juice and grape juice and is fortified with Vitamins B-1 and B-2. Both are being marketed in tall, lithographed "picture window" quart cans. Selling price is approximately 30c.

"Pressure Puff" Dog Food

Topco Associates, Inc., Chicago, Ill., introduced a new dog food—Kings Kennel—in an expanded nugget form. The company stated that a new "pressure puff" process enables pro-

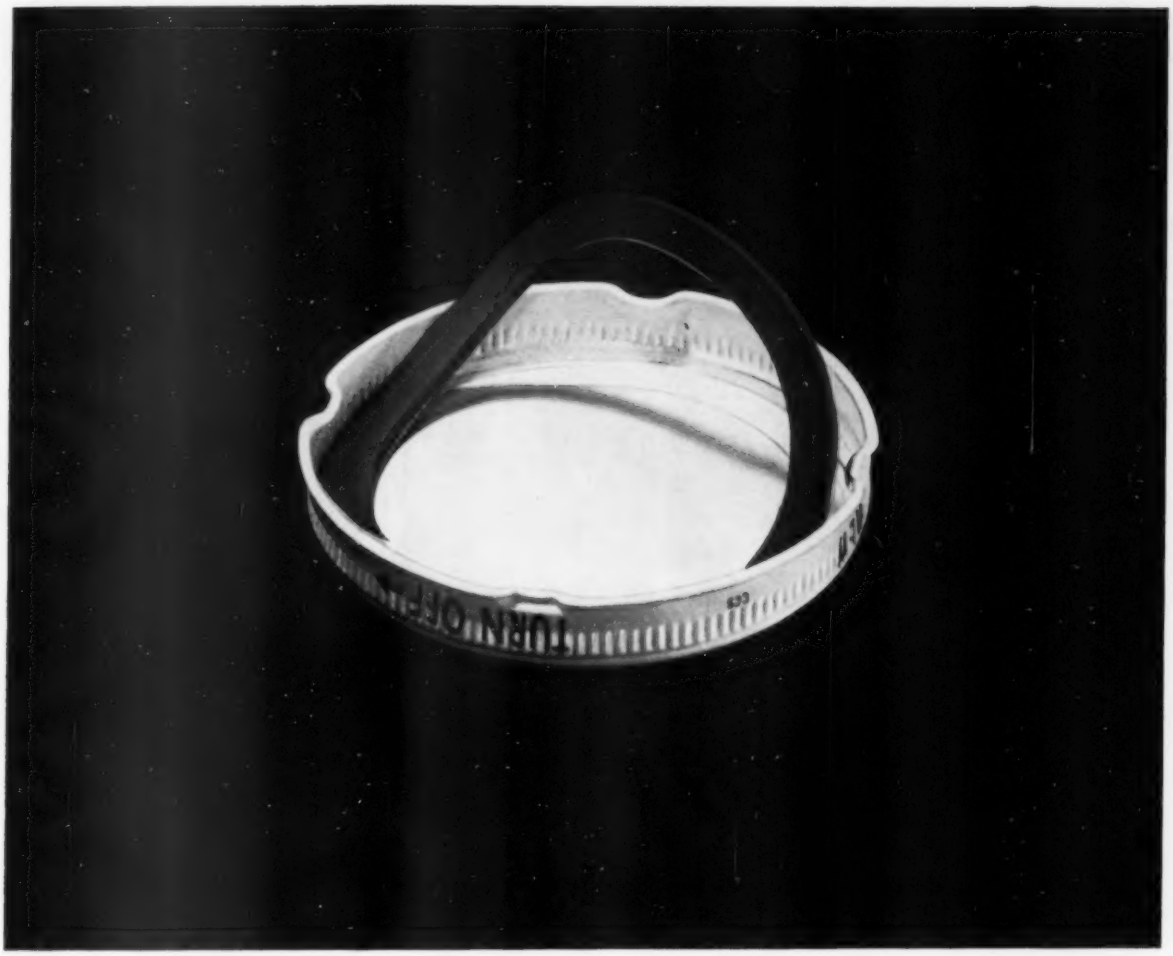
duction of the nugget form which is "at least twice as palatable to dogs as meal, pellets or kibbled biscuits." The product is packaged in 2¼ lb. boxes, and 5, 10 and 25 lb. bags.

Applesauce

H. J. Heinz Co., Pittsburgh, Pa., has introduced Applesauce, the newest of the 57 Varieties. Heinz Applesauce is packed in a 15 oz. glass jar. A large cap permits easy removal of the contents and greater ease in shelf stacking. The new product is a blend of apple varieties from the Shenandoah Valley area and is processed at the Heinz plant in Chambersburg, Pa.

Red Hat Dog Food

Alabama Flour Mills, Decatur, Ala., has introduced Red Hat Dog Food in the Southeastern area. It is produced



. . . you are looking at the only lug cap

that gives you a **LIVE RUBBER SEAL**

Crown pioneered the development of the quarter-turn lug cap. And only CROWN offers you the positive protection of a *live rubber* seal. Live rubber will *reseal* again and again. There is *no deterioration* or "setting"—elasticity assures *conformance* even to rough jar lips. Live rubber is the *best* material for withstanding live steam and pasteurization temperatures.

CROWN lug caps are designed for maximum mechanical efficiency as well as the fashion flair. Deeper sides give added strength and ease of handling. Choice of plain or knurled sides offers you maximum flexibility for all product lines. Crown's exclusive, *flat-seating lug* threads give positive, non-loosening seal—with or without vacuum pack.

For lug caps to fit all your requirements—no matter how exacting . . . for C.T. caps with the broadest selection of liners ever offered . . . let Crown serve you.

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CROWN CORK & SEAL COMPANY, INC.
9300 Ashton Road, Philadelphia 36, Pa.

NOW!

LOWEST-COST ABBE!

Just Load-Light-Look... get top accuracy readings in seconds!

Dependable quality control is high-speed routine with a B&L Abbe-3L Refractometer . . . and the price is the lowest in the field. You can easily test several samples a minute. Horizontal prism assembly is right up front, loads or wipes in a wink. Duo-Speed control gives you rapid scanning or fine line setting at the touch of a finger. Precision scale reads instantly to .0005; reliable estimates to .0001. Practical range: n_D 1.30 to n_D 1.71. (NEW! High Range Abbe-3L, n_D 1.45 to n_D 1.84 range, for high-index liquids. Write for quotation.)

LOAD! Front horizontal prisms for easiest loading ever.

LIGHT! Comfortably low-positioned hold-down switch lights scale.

LOOK! See accurate reading instantly on illuminated scale.

ONLY $745 COMPLETE

BAUSCH & LOMB OPTICAL CO.
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Send me complete data on the following B&L Refractometers:

☐ Abbe-3L ☐ Industrial ☐ Hand
☐ High Range Abbe-3L ☐ Butyro ☐ Juice
☐ Precision ☐ Oil Grading ☐ Dipping
☐ I'd like a demonstration of the models checked above.

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COMPANY .....
ADDRESS .....
.....

MAIL COUPON FOR DATA AND ON-THE-JOB DEMONSTRATION OF INDUSTRY'S MOST COMPLETE LINE.

in two forms—"Chunks" for pets and "Crackling Style" for more active dogs. They are packaged in five, 25- and 50-lb. packages which were designed by Jim Nash Associates.

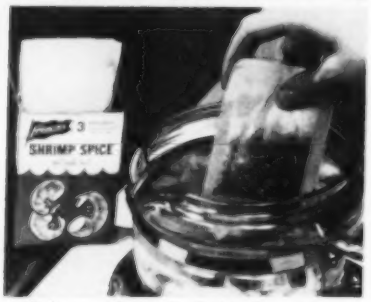
New Package Briefs

Corn Products Co., New York, N. Y., has introduced a new bottle for Karo Syrup pints. It has a wider opening and a center depression for the label. Recipes are featured on the label.

Cherry Growers Inc., Traverse City, Mich., has adopted a gold foil label

for its Reddi-Maid Jellied Cherry Sauce. The label was designed and manufactured by the Flexible Packaging Div., Continental Can Co.

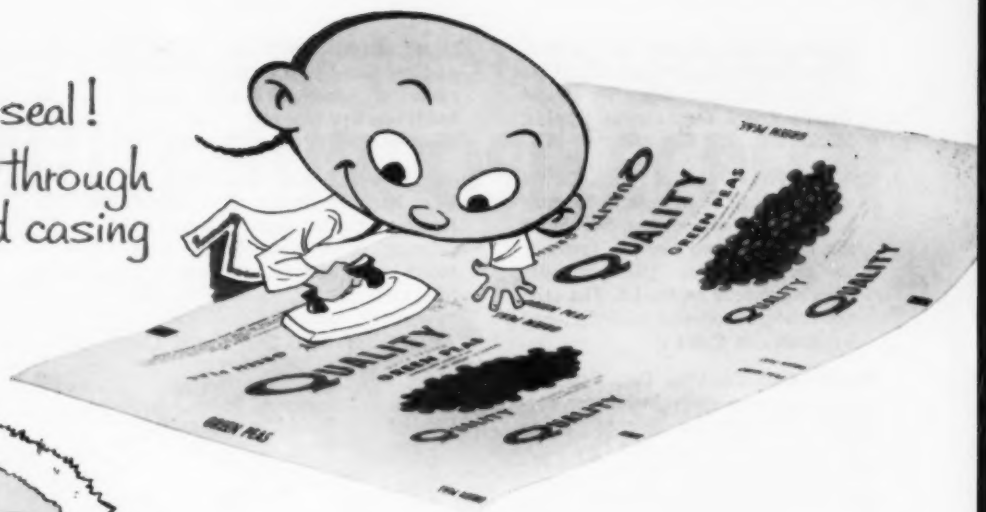
R. T. French Co., Rochester, N. Y., is using a viscon packet for its Shrimp



Spice and Crab Boil. The ¼ oz. viscon envelopes are packed three to a box.

H. W. Madison Co., Cleveland, Ohio, has adopted fluted panel refrigerator jars for packaging Dolly Madison pickle products. Jars are by

stronger seal!
holds tight through
freezing and casing



stays sealed at 40° below

slick surface
at any temperature

new TYTON ZERO-SEAL overwraps

now almost half again as strong!

Your products will have even *greater* protection when you put them in Marathon's new Tyton Zero-Seal overwraps. Seal strength—through all temperature ranges—is up a whopping 44%!

At 40° below—as at sealing temperatures—Marathon's new Tyton Zero-Seal stays sealed . . . guards against moisture losses . . . always presents a neat, clean package. Glossy, scuffproof Tyton Zero-Seal is tops in workability on high-speed automatic equipment . . . always gives your roto-printed pictorials bright, colorful display.

Ask the Man from Marathon to show you samples. Or write: Marathon, A Division of American Can Company, Dept. 656, Menasha, Wisconsin. In Canada: Marathon Packages Limited, 100 Sterling Road, Toronto 3.

MARATHON PACKAGES

SELL BRANDS · PROTECT PRODUCTS · SPEED PRODUCTION

Owens-Illinois Glass Co., Toledo, Ohio; closures by White Cap Co., Chicago, Ill.; and labels by Grand Rapids Label Co., Grand Rapids, Mich.

Colonial Stores, Inc., Atlanta, Ga., is using a new lithographed "picture label" for its coffee cans. Shown on the label are two popular methods for serving coffee. Directions for brewing appear on the lid. The cans are lithographed and manufactured by American Can Co.

Machiasport Canning Co., Eastport, Me., is using individual outer cartons to maket its Maine Queen brand sardines. The carton, designed and produced by Container Corporation of America, Boston, Mass., holds one key-type can of small sardines packed in oil or mustard.

Aunt Nellie's Foods, Inc., Clyman, Wis., is packaging its Aunt Nellie's Rosebud Pickled Beets as a cocktail delicacy in a globe-shaped unlabeled jar. Brand and product identification are lithographed on the "Twist-Off" cap. Jars are by Hazel-Atlas Glass Div., Continental Can Co.; caps by White Cap Co.

Wild Acres Gourmet Foods, Inc., Steep Falls, Me., has adopted new packaging for its line of turkey and chicken heat and serve dishes. The packages consist of a new style Ekco-Alcoa square tray with lids designed and lithographed by Milprint, Inc., Milwaukee, Wis. The firm has also adopted a new lithographed carton for its "Zest" brand Cranberry.

Wilson & Co., Chicago, Ill., is using boil-in-bag containers called the Wilson "Menu-Pak" for packaging a wide variety of entrees. The plastic container, manufactured by Min-

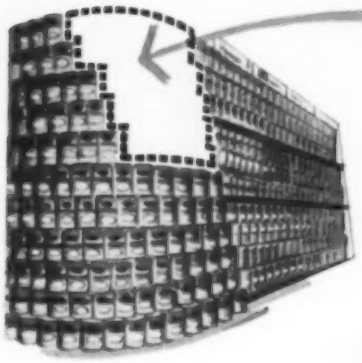
nesota Mining and Mfg. Co., can withstand temperatures up to 240° F., and its tops and edges remain cool enough to handle.

P. Brennan Co., Chicago, Ill., has adopted a laminated transparent pouch for its smoked and ready-to-eat Lee Brand Chipped Ham. The 3¼ oz. pouch is constructed of a cellophane-polyethylene lamination with a four color printed design. The product is being distributed nationally and can be purchased individually or in cartons of 12. Pouches are by Flexible Packaging Div., Continental Can Co.

Westgate - California Corp., San Diego, Calif., is using metalized paper labels rather than foil to package its 6 oz. can of Bits-O'-Sea Tuna. The labels are manufactured by the Flexible Packaging Div., Continental Can Co.

Indian Trail Foods, Inc., Wisconsin, Rapids, Wis., has adopted a new institutional container for its frozen cranberry-orange relish. The new package is a 3 lb. wax-lined round tub. Unused portions can be safely stored in the package.

McClintock-Stern Co., Inc., San Francisco, Calif., has adopted new polyethylene shaker fitments and metal screw caps for its entire glass line of Claremont seasoning spices. Bottles, metal caps and shaker fitments are supplied by Owens-Illinois Glass Co., San Francisco.



WILL IT COST YOU TOO MUCH . . . to fill this space?

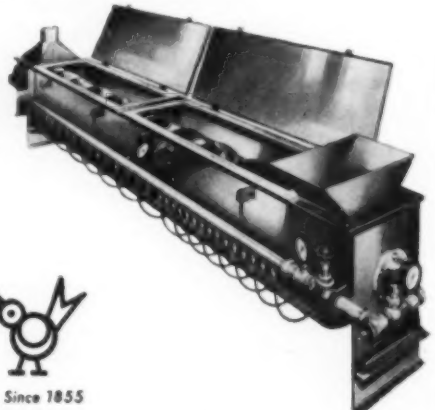
Profitably meeting the growing demand for foods means more than just increasing production. It also requires consistent product quality . . . and low operating costs.

Replacing outdated processing machinery with modern Robins equipment can help protect *your* profits now and in the 1960s . . . by giving you greater production of high quality foods at less cost.

For details on how Robins equipment fits into your profit picture, see your Robins representative. Or, write for FREE TECHNICAL CATALOG.

AN EXAMPLE...

The Robins Thermetic Blancher keeps shrinkage at a minimum. Engineered steam flow completely eliminates guesswork.



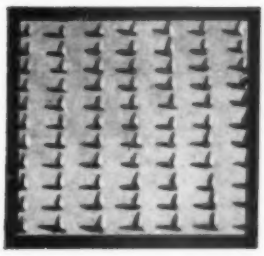
A.K.Robins AND COMPANY, INC.

Manufacturers of Food Processing Equipment Since 1855

713-729 E. Lombard Street, Baltimore 2, Md.

BRAND NEW FROM SIMPLICITY!

3'x3' MULTI-PURPOSE SCREEN



PRICKING PANEL INCREASES THE RATE OF BRINE OR SWEETENING PENETRATION

The Simplicity "pricking panel," shown at left, is entirely new in the industry; it provides fine mechanical perforations of fruits and vegetables and increases the rate of brine and sweetening penetration. Each and every fruit or vegetable passing over this vibrating panel receives many tiny perforations, thus enabling faster and better penetration of brine or sweetening.

- pricking
- scalping
- sizing
- dewatering
- trash removal
- industrial waste removal

The new Simplicity 3' x 3' Multi-Purpose Screen, with its complete versatility, offers the entire food industry a revolutionary way to cut food processing costs with higher production speeds, a more uniform product and greater flexibility for multi-purpose use. The Multi-Purpose Screen is adaptable to a number of operations and has been used successfully to size, prick, dewater, scalp and remove trash from a number of fruits and vegetables.

The screening section of the Simplicity Multi-Purpose Screen can be equipped with screen cloth of any specification and can be easily replaced with the new pricking panel. The machine itself can be constructed of mild or stainless steel and stainless steel wire cloth is normally used.

Simplicity offers expert counsel for food screening problems based on unequalled experience in screen applications. For more information on Simplicity food screening equipment, write Department 7, Simplicity Engineering Company, Durand, Michigan.

Simplicity
TRADE MARK REGISTERED

ENGINEERING COMPANY·DURAND 21, MICHIGAN

SALES REPRESENTATIVES IN ALL PARTS OF THE U.S.A.

FOR CANADA: Simplicity Materials Handling Limited, Guelph, Ontario.

FOR EXPORT: Brown & Sites, 50 Church Street, New York 17, N. Y.

Make Market Orders Effective Without Juggling Prices

Marketing agreements and orders can be useful to potato growers and snap bean growers without upsetting competitive prices. The New York sour cherry growers have such an agreement.

The advantages come from improvements in production through research programs. The use of mechanical equipment for harvest would be increased and thus lessen the effect of a disrupted supply of migrant laborers at harvest time.

This form of cooperation would be effective whereas price setting would not. There is no way in which New York vegetable growers could set market prices, effectively. There are too many competitive growing areas, such as Florida and the Eastern Shore of Maryland. The production from these areas would upset any price setting program the New York producers might establish.

—Don J. Wickham, commissioner of Department of Agriculture and Markets, New York State at Central New York Potato and Vegetable Growers Council, New York Mills, March 19.

BURIED TREASURE of $10,000, a trip and spending money for two weeks will be awarded to the winner of a contest which is being sponsored by Libby's Frozen Foods during their annual Treasure Aisle Promotion.

Local Discounts Are Tied to National Ad Campaign

One purpose of Birds Eye's 1959 ad campaign is to build up in-store traffic for the retailer. For this reason the campaign has been built around a national and local series which began April 1 and will run through June 30.

The national aspect of the campaign includes product advertisements in Sunday newspaper magazine sections. They are full-page ads in full-color.

The local tie-in ads appear on the following Thursday. The newspaper advertisements are in black and white. They contain coupons or other offers relating to the same Birds Eye product advertised the previous Sunday. The offers are tailored to each market.

—Birds Eye Div. of General Foods Corp., White Plains, N. Y.

Consumers Like to Pick and Choose

The element of selection will influence the growth of the frozen food industry. Every food outlet should offer consumers the choice of a variety of packed goods. This builds interest in frozen foods; adds glamour; offers greater taste appeal to frozen food products, and stimulates impulse buying.

Therefore, private labels and national labels shouldn't be competitors, but natural allies working together.

Consumers have a right to free choice and to deny that right is to antagonize these buyers. By offering a minimum of brands, a retailer will soon find that sales have dropped.

The two distribution patterns need each other. If there isn't cooperation, the frozen food industry will stagnate. New product development will be nil because private labels are not willing nor able to assume the promotional costs. Today, the national packer beats the path.

A major problem of private label vs. national label is the shortage of frozen food cabinet space. It is increasing but is still behind the industry as a whole. If more merchants see the profit possibilities in volume sales of frozen foods, cabinet space will increase by leaps and bounds. When this happens, there will be a market for more frozen foods and more labels.

—Norton Steele, general sales manager, Stokely-Van Camp Frozen Food Div., Oakland, Calif.

Three Ways to Increase Pimiento Sales

Pimientos are used in the preparation of food dishes in almost two-thirds of Amercian homes. However, they are not consumed quickly. Some time lapses between purchases. When pimientos are purchased it is a planned rather than an impulse purchase.

To increase its use, three areas of promotion could be explored—recipes, availability and packaging.

PLAN TO SAVE

If you are serious about saving money... we have a booklet you should read. It's about printing on your shipping containers.

The booklet is **FREE** and if you like the story you have nothing extra to buy that you don't already buy, except — you'll buy better and easier. Hundreds of name brand box users now use this system. Read how it can work for you!

JAS. H. MATTHEWS & CO.
BOX PRINTING DIES
3925 Forbes Ave. • Pittsburgh 13, Pa.

7 plants

BOSTON • CHICAGO
CLIFTON • JACKSONVILLE
PHILADELPHIA • PITTSBURGH
ST. LOUIS (RUB-R Eng. Co.)

PROTECT COLE CROPS

from late season insect raids

with

PERTHANE

Protect your cole crops from now 'til harvest by spraying or dusting with PERTHANE. This chlorinated insecticide does a good job of controlling late season worm flare-ups. Certain phosphate insecticides may be combined with PERTHANE for quicker kill and control of aphids.

Low toxicity to warm blood animals and high residue tolerance make PERTHANE extra-safe to use. PERTHANE can be applied right up to within three days of harvest if necessary.

Spray with PERTHANE EC emulsion concentrate, or apply in dust formulations alone or mixed with appropriate fungicides and insecticides.

Ask your dealer for a descriptive folder on late season use of PERTHANE for cole crops.

PERTHANE *is a trademark, Reg. U.S. Pat. Off. and in principal foreign countries.*

Chemicals for Agriculture

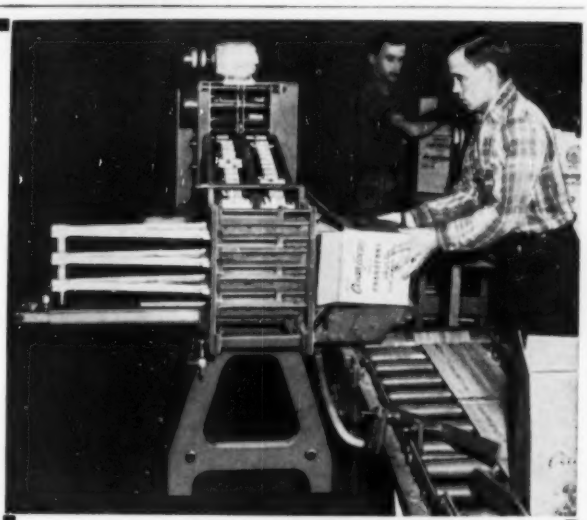
ROHM & HAAS COMPANY

WASHINGTON SQUARE, PHILADELPHIA 5, PA.

HIGHER PRODUCTION SPEEDS WITHOUT MANUAL EFFORT!

WITH A BURT HIGH SPEED CASE PACKER

The Improved Burt Case Packer saves time and effort. The operator merely places the case over the funnel chute which holds it securely in position. A 2-layer case is filled with a single plunge, and then up-ended without any manual effort.



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Seattle, Wash. — Salem, Oregon

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401 E. Oliver St. — Baltimore 2, Md.

Fast, easy-to-read and dependable

EXACT WEIGHT®

MODEL 273
Capacity 12 lbs.

Protect your profit margin with Exact Weight Scales

You can eliminate costly overweights and speed production with fast-weighing, easy-to-read Exact Weight scales. Fractional ounce visible weight indication can be read accurately at a glance. What's more, these precision scales are designed for low maintenance and long service. Model, 273, above, offers 1 inch of indicator travel equal to 1 ounce over and under. Graduations to your requirements. Exact Weight scales are backed by more than 45 years of experience in precision weighing equipment. Write today for details on Exact Weight scales for canners and packers.

MODEL 213
Capacity 3 lbs. Indicator travel is 1 in. over and under equal to 1 oz. over and under. Write for Bulletin 3326.

MODEL 900
Capacity 25 lbs. Indicator travel is 2 in. over and under equal to 4 oz. over and under. Write for Bulletin 3324.

THE EXACT WEIGHT SCALE CO.
929 W. FIFTH AVE., COLUMBUS 8, OHIO
In Canada: 5 Six Points Road, Toronto 18, Ont.

Exact Weight SCALES

Sales and Service Coast to Coast

Find us in your local Yellow Pages

BETTER QUALITY CONTROL . . . BETTER COST CONTROL

1. A recipe program could be developed as a means of increasing consumption in the home. Popular use of pimientos has been as an ingredient in salads and sandwich spreads.

2. Pimientos should be made available in popular container sizes.

3. The majority of homemakers prefer glass packaging because the product looks attractive in glass, the amount on hand is easily verified, and it can be resealed for easy storage.

—National survey conducted by Home Makers Guild of America for the Prepared Foods Div. of Owens-Illinois Glass Co.

FFF Potato Supply Is Low For Season

The 1958 inventory statistics indicate that upwards of a 90-day inventory of retail packaged plain frozen French fried potatoes is required at this season of the year. This year's February inventories indicate a 75-day supply. The figure was based on average sales and average inventories for the January to May operating period.

Inventories developed during this spring must include at least a 60-day supply to compensate for shutdown of the major part of the industry's production facilities during summer months. A 30-40 day stock should be on hand at all times to service orders being received currently.

—Nephi Grigg, president, Frozen Potato Products Institute, Chicago, Ill.

Shipping Case Leads a Double Life

A shipping case that doubles as a display piece gives the retailer a strong selling point. The box suggests related items and offers basic menu ideas. In this case, the mint sauce display unit has a full-color illustration of a rolled lamb roast.

The best location for this unit was found to be in the meat department. It requires very little counter space, being only 11½" by 13¾" by 17".

—Crosse & Blackwell Co., Baltimore, Md.

How much more does quality cost?

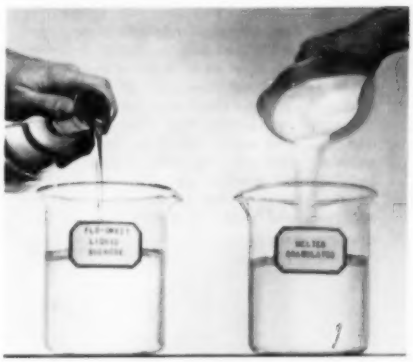
Not a penny, when you use Flo-Sweet for sweetening!

In fact, Flo-Sweet *saves* you money in a number of important ways. By eliminating manual handling of sugar. By avoiding sugar melting costs. In many areas, in the cost of sugar itself.

But a vital reason for the revolution that Flo-Sweet is making in food processing is *quality*. Flo-Sweet liquid sugars make possible a degree of quality control, and even quality improvement, that is difficult or too expensive with ordinary granulated.

You can easily verify Flo-Sweet's higher quality yourself, through the simple test shown at the right. Just dissolve some of your favorite granulated . . . concentrate it to 67° Brix . . . and compare its color with that of Flo-Sweet liquid sucrose.

Your Flo-Sweet engineer will be glad to help you explore ways to use Flo-Sweet liquid sugars in cutting costs while boosting quality. Why not consult him soon?



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SERVING INDUSTRIAL SUGAR USERS EXCLUSIVELY
FROM YONKERS, ALLENTOWN, DETROIT, TOLEDO

SUPPLIERS NEWS

Companies & Plants

Shareholders of **National Starch Products, Inc.**, New York, have approved a change in the company's name to National Starch and Chemical Corp.

Stone Container Corp., Chicago, Ill., will start a new production line at the Eastern Div. plant in Philadelphia for moisture-proofing corrugated shipping boxes.

American Can Company has begun construction on a 30,000 sq. ft. addition to its Fairport, N. Y., plant as part of a $600,000 program to consolidate can packing facilities.

Associated Seed Growers of New Haven, Conn., recently completed a motion picture titled "First The Seed," which depicts crop development.

National Can Corp., Chicago, Ill., has begun dry offset printing of metal cans on special order. The firm also announced that it will build a new plant at Hanover, Pa., this year. Production capacity will be 10 million cans weekly.

PAPERBOARD MILL Container Corporation of America, Chicago, Ill., formally opened its Brewton, Ala., bleached sulphate paperboard mill in April. The mill produces approximately 300 tons of paperboard a day. Shown above is the final operation at the mill. A rewinder slits and trims and the paperboard is wound into jumbo rolls 196 inches wide and weighing up to 18 tons. Below is an outdoor view of the mill. Administration building and machine room are at the left. At the right, in the background, are the digesters and recovery boiler.

Chas. Pfizer & Co., Inc. has leased a major part of a 32-story building to be constructed at 235 E. 42 St. in New York, N. Y. It will be known as the Ffizer Building and will serve as world headquarters for the firm.

Mead Corp., Dayton, Ohio, purchased the Century Machine Co. plant in Oakley. It will serve as headquarters for the firm's New Product Development Div.

Union Bag - Camp Paper Corp., New York, has purchased the majority of Eastern Box Co.'s stock for an undisclosed sum. Eastern will be operated under its present name as a subsidiary of the parent firm.

American Can Co. has annouced another major reduction in metal can prices. The price cuts range from $1.40 to $2.58 per thousand depending upon the size and style of the can, and apply to containers used for canning fruits and vegetables.

Eureka Specialty Printing Co., Scranton, Pa., has purchased Mark Andy, Inc., St. Louis, Mo., manufacturer of pressure-sensitive labels and tapes. Mark Andy will maintain its name and will operate as a division of Eureka.

Olin Mathieson Chemical Corp., New York, announced that operations have begun at the new corrugated container plant in Joliet, Ill.

Men in the News

Arch Payne was elected assistant vice president of Florasynth Laboratories, Inc., New York.

Donald F. Marks was appointed sales representative in the northeastern states for the Pump Div., Waukesha Foundry Co. **Walter L. McBride** will represent the southern states.

Gilbert W. Wiessner was appointed sales representative in North Carolina for Crown Cork & Seal Co., Inc., Philadelphia, Pa. **William I. Lang**, Southwest regional sales manager of Crown, was presented with a ruby lapel pin in recognition of more than 35 years' service with the firm.

Murray Stempel was elected president of Morningstar - Paisley, Inc., New York. Mr. Stempel succeeds George J. Muller, who was elected vice chairman of the board.

Gail Van Drasek was appointed to the Michigan sales staff of Geigy Agricultural Chemicals, div. of Geigy Chemical Corp., Yonkers, N. Y.

Frederick S. Leinbach was elected president of Riegel Paper Corp., New York. John L. Riegel, who has been chairman of the board and president, will remain as chairman.

W. W. McBlaine was named epoxy specialist for the West Coast market, Dow Chemical Co., Midland, Mich. He will serve Seattle, San Francisco and Los Angeles sales territories.

Thomas Evans was elected chairman and chief executive officer of Crane Co., Chicago, Ill.

John F. Duffy was elected treasurer of Chas. Pfizer & Co., Inc., New York. **John R. Marshall, Jr.**, was named assistant treasurer.

Daniel F. Pillow was named sales and service manager, "Kold Hold" Div., Tranter Manufacturing, Inc., Lansing, Mich.

Al B. Sheen

R. H. Starrett

Al B. Sheen was appointed sales manager of the Mid-West region of Crown Cork & Seal Co., Inc., Philadelphia, Pa.

Richard H. Starrett was appointed chief production engineer of Pfaudler Co., div. of Pfaudler Permutit Inc., Rochester, N. Y.

Clark Rogers was promoted to director of engineering, Larsen Co., Green Bay, Wis.

Dr. William R. Prindle was appointed acting general manager, research and development, Hazel-Atlas Glass Div., Continental Can Co. **Robert S. Long** was named new products manager for the Glass and Plastics Group of Continental.

Robert H. Lucas was appointed Great Lakes regional manager for foil

Use RHOTHANE insecticide to kill fruitworm, hornworm, pinworm, and psyllid on tomatoes.

Chemicals for Agriculture

ROHM & HAAS COMPANY

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and a wide range of other insects attacking vegetable crops with

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Residue tolerance of 0.75 ppm permits application relatively close to harvest.

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and containers and **Robert F. Watson** as assistant product manager of the Foil and Container Div., Kaiser Aluminum & Chemical Sales, Inc., Chicago, Ill.

Harry J. Conover was appointed sales territory representative for the Canning Machinery Division's Eastern Operation in Hoopeston, Ill., of Food Machinery and Chemical Corp.

A. J. Castle

A. L. Harris

Alexander J. Castle was appointed head of a new aluminum foil packaging research department for Kaiser Aluminum & Chemical Corp., Chicago, Ill.

Arthur L. Harris, president of Mead-Atlanta Paper Co., Atlanta, Ga., was elected a southern area director for the Folding Paper Box Assn. of America.

Harvey A. Waddell, treasurer of Gisholt Machine Co., Madison, Wis., has also been elected secretary and has been made a member of the board of directors.

Roy R. Grundy was appointed Chicago sales representative for the Western-Waxide Div., Crown Zellerbach Corp., San Francisco, Calif.

Duncan E. Hill, Jr., was appointed eastern regional manager for Lamson Mobilift Corp., Portland, Ore. Mr. Hill will headquarter in Long Island City, N. Y.

O. R. Gibbons

E. King Graves

O. R. Gibbons was appointed product manager, cartons, for the Packaging Div., Olin Mathieson Chemical Corp., New York.

E. King Graves has joined the headquarters sales executive staff of the Portland Div., Emhart Manufacturing Co., Portland, Conn.

Robert G. Wirthlin was appointed sales manager for Horix Manufacturing Co., Pittsburgh, Pa.

Albert G. Neumayer was appointed vibrating screen sales engineer, Syntron Co., Homer City, Pa.

Henry I. Keves was promoted to technical service engineer for Diamond Crystal Salt Co., St. Clair, Mich.

Floyd Flexon was named general manager of Owens-Illinois Glass Co.'s new plant at Bagota, Columbia.

Tommy C. Brown has joined Hardy Salt Co., St. Louis, Mo., as a representative in Central Tennessee and parts of Kentucky and Alabama.

P. Wayne Frey was appointed sales representative in the Northeastern district and David C. Wilson, Central district, for Crompton & Knowles Packaging Corp., Holyoke, Mass.

R. W. Richardson was appointed sales representative in the Midwest for Associated Seed Growers, Inc., New Haven, Conn. Carl E. Hohlt will replace Mr. Richardson in Minnesota and Wisconsin.

R. H. Tooker

Frank H. Graf

Robert H. Tooker was appointed manager-product sales for Ekco-Alcoa Containers Inc., Wheeling, Ill.

Franklin H. Graf was named executive vice president and a director of A. C. Nielsen Co., Chicago, Ill. He will direct the firm's U.S. Food-Drug operations.

Paul D. Griem was elected executive vice president of Glass Containers Corp., a wholly-owned subsidiary of Hunt Foods and Industries, Inc. **Edward D. Goldstein** was elected vice president of the firm.

J. N. Andrews, executive vice president of Ohio Boxboard Co., Rittman, Ohio, was re-elected president of the Folding Paper Box Assn. of America.

C. Berger Graves, vice president of Sefton Fibre Can Co., is in charge of the firm's Fibre Can Div. **Robert J. Brockman** is vice president in charge of the Plastics Div.

Paul L. Hershfield has joined the Thatcher Glass Manufacturing Co., Inc. as executive vice president.

N. T. Steadman

R. G. Madill

Nat Steadman was appointed national sales manager of the Folding Carton Div., Mead-Atlanta Paper Co., Atlanta, Ga. **Rutledge Bermingham, Jr.** was named general manager of the firm's Packaging Division in Memphis, Tenn.

R. G. Madill has been appointed Eastern District Sales Manager for the Commercial Container Div., Ball Brothers Co., Muncie, Ind. His headquarters will be at the firm's offices in N. Y.

Clifford S. Smith was appointed general manager of Dominion Paper Box Co., Ltd., Toronto, Canada, succeeding Charles W. Stephens, retired.

James V. Melton, vice president, Pollock Paper Corp., was elected president and chairman of the board of directors of the Waxed Paper Merchandising Council. He replaces Joseph C. Tobin of Crown Zellerbach Corp. who retired.

John Knarr was appointed government sales manager and **Robert J. Laws** was appointed general sales manager of Baker Industrial Trucks, a division of Otis Elevator Co., Cleveland, Ohio.

Charles M. Standart was promoted to chief engineer of Becco Chemical Div., Food Machinery and Chemical Corp., Buffalo, N. Y. He succeeds James N. Vermilya, who is retiring but will continue to serve FMC as a part-time consultant to its International Div. **Henry C. Vacketta** was appointed chief application engineer for FMC's Eastern Operation in Hoopeston, Ill.

Obituaries

Gustav F. Siemers, technical director of the Vitamin Div. of Hoffman-La Roche Inc., Nutley, N. J., died April 12. Mr. Siemers was a resident of Montclair, N. J.

Howard J. Lacy, II, 53, died recently from a heart attack. He was president of the U. S. Corrugated-Fibre Box Co., and served as a director of Knox Glass, Inc., and the Albermarle Paper Co.

inhibit rust economically **ON TIN CANS IN BAGS** during shipment **AND STORAGE**

The addition of Ferro-Pak rust inhibitor makes the can bag the ideal storage package. The can bag, being the smallest of the storage packages, is the best for this purpose.

You can inhibit condensation, discoloration or rust on cans in bags with Ferro-Pak. The Ferro-Pak chemical coated on paper does the actual job of protecting. The chemical coating inactivates the corrosion action of oxygen and moisture, which causes rust. The chemical coating works 2 ways:

1 **It slowly vaporizes from the paper and forms an invisible protective film around the steel articles that prevents corrosion.**

2 **It dissolves any moisture that may condense on steel articles due to temperature cycling, rendering the moisture non-corrosive.**

Ferro-Pak was developed by Cromwell's research and development department to protect tinplate from corrosion during shipment from the steel mills to the can manufacturers. In wide use today by all of the major tinplate producers, Ferro-Pak meets the standards set forth by the Food and Drug Administration of the Department of Health, Education and Welfare.

And now . . . as a result of further research, Cromwell Ferro-Pak is available in a new form for positive, low-cost protection of tin cans in bags in shipment and storage. For complete information on this new development, return the coupon below.

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INDUSTRY NEWS

Companies & Plants

Old Judge Coffee Co., St. Louis, Mo., has acquired the business of William S. Scull Co., Inc.

Chef Lucas Cannery, New Bedford, Mass., has been purchased by the First Safe Deposit National Bank of New Bedford, which held a mortgage on personal property of the former owner, George Lucas.

Salada-Shirriff-Horsey is constructing a plant for the production of instant potatoes in Alliston, 30 miles northwest of Toronto, the Ontario Potato Growers' Assn. announced. Contracts have been signed for tuber potatoes and processing should start by September.

John Morrell & Co., Chicago, Ill., has purchased Tom Sawyer Meat Products, Inc., Minneapolis, Minn. Morrell & Co. plans to consolidate its Minneapolis and St. Paul operations with the Tom Sawyer operations in the acquired building.

Scotian Gold Co-op Ltd., Kentville, Nova Scotia, has entered the canned baked apple business. The retail firm's product contains three Red Rome Beauty apples that can be heated or served cold. Baked apples were previously imported from the U. S.

Reedsburg Foods Corp., Reedsburg, Wis., has leased the Hillsboro, Wis., canning plant and will pack whole kernel corn there this season. The plant was idle in 1958.

R. T. French Co., Rochester, N. Y., is enlarging production capacity for production of instant mashed potatoes at its Shelley, Idaho, plant at a cost of $1 million. About half of the cost will be for buildings and rest for equipment. The company has instituted a new first in the industry. R. T. French Co. has installed the first two-armed RAMAC (random access memory accounting machine) produced by IBM in its offices. The machine will be used to keep up-to-date second inventory control of the 600 different items which French stocks and sells.

Gerber Products Co., Rochester, N. Y., and Edgell & Sons Ltd. of Australia have made a licensing agreement. The Edgell company, a leading processor of adult foods, will manufacture and distribute a complete line of strained and junior baby foods. They will be marketed throughout Australia under the Edgell-Gerber label.

Armour and Company has purchased Pfaelzer Brothers, Inc. Operations will continue as Pfaelzer Brothers, Division of Armour and Company, under the direction of the three Pfaelzer brothers. The new division will remain in Chicago and present staff will be retained.

Imperial Sugar Co. has built a new, completely automatic melt house at a cost of $2,100,000 at the firm's refinery in Sugar Land, Texas.

Corn Products Co., New York City, will spend $28 million for world-wide expansion and modernization in 1959.

Custom Specialty Meat Inc., Cincinnati, Ohio, is a newly formed firm which will produce meat patties and processed mushroom, pepper and onion-flavored steaks for the restaurant trade. The owners are Norbert A. Berding and Robert Butler.

Fairmont Foods, Inc., Omaha, Neb., has acquired for cash all assets and the business of Kitty Clover, Inc., of Omaha. The former owners are retiring but all other personnel will be retained by Fairmont.

General Mills, Inc., Minneapolis, Minn., has purchased a 133,000 sq. ft. plant formerly owned by Admiral Corp. in West Chicago. The facility will be converted into a specialty mix plant for consumer food items. Operations will begin sometime this fall.

Tri State Packers Assn., at a special luncheon meeting, presented the **Great Atlantic & Pacific Tea Co.** with an award of recognition "for its position of leadership in the business of food retailing." The firm is celebrating its 100th birthday anniversary this year.

Seybold Stahl is moving his **Springfield Pickle Works** from Springfield, Mo., to Corning, Ark. Corning Chamber of Commerce signed a contract with Mr. Stahl for $250,000. The firm's name will be changed to Corning Pickle Co., Inc.

Men in the News

Frank Armour, Jr., president, H. J. Heinz Co., Pittsburgh, Pa., was elected vice chairman of the board of directors of the Brand Names Foundation, Inc., New York City.

Richard L. Baird was named product marketing manager, Franco-American products, Campbell Soup Co., Camden, N. J. **Gerald E. Thomas** was named to a similar post in frozen foods. **M. Crawford Pollack** is the director of marketing development at Campbell.

Milton A. Zimmerman, director of standards, Campbell Soup Co., Camden, N. J., has been awarded a Sloan Fellowship at the Massachusetts Institute of Technology, School of Industrial Management.

Ralph M. Butterfield of the Eaton Canning Co. was elected president of the Indiana Canners Assn.

Howard Cook was promoted to distributive sales manager of the Madison, Wis., plant, Oscar Mayer & Co.

Dr. Conrad A. Elvehjem, president, University of Wisconsin, spoke on "Dividends from Investments in Nutri-

NEW NOODLE PLANT—I. J. Grass Noodle Co., Chicago, which packs "Mrs. Grass' " brand has announced plans to build a new factory at 3737 West 49th St. in Chicago, Ill. January 1, 1960 has been set as completion date. The project will cost a half million dollars.

For New and Existing TRI-CLAMP Installations . . .

TRI-CLOVER now offers 5 Tri-Clamp types for permanent "CIP" and "Take-Down" lines

13 MHLA—Hinged Tri-Clamp—Adjustable. Assembly of joint utilizing this clamp is facilitated by hinge shown in close-up. Also note adjusting screw built into toggle locking device. Provides added assurance of positive leak-tight joint.

13MS—
Standard Tri-Clamp

13MSA—
Standard Tri-Clamp—Adjustable

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Six years ago, Tri-Clover Division introduced Tri-Clamp,® an entirely different concept of sanitary fitting design and fabrication. This new idea in sanitary piping offered quick, easy installation, longer fitting life and appreciable savings over conventional assemblies.

A continuing program of research and development has resulted in an expansion of this now popular line. Today, you can choose from five different Tri-Clamp types . . . for *all* your Permanent "CIP" and "Take-Down" sanitary lines. These new, improved Tri-Clamps are fabricated from Type 304 stainless steel and are available in 1", 1½", 2", 2½", 3" and 4" O.D. tube sizes. (1" ferrules and fittings utilize 1½" clamp assembly.)

A better-than-ever buy for new installations, the new designs are completely interchangeable with *any* Tri-Clamp now in service . . . regardless of age.

Like all Tri-Clover sanitary valves, fittings and pumps, Tri-Clamps are fabricated from highest quality materials by experienced craftsmen . . . to give you the ultimate in service. For the complete Tri-Clamp story, write for new Catalog 1-159.

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tion Research" at the Nutrition Foundation's board of trustees meeting held in Chicago, April 7.

G. F. Kent was appointed manager of marketing research, Grocery Products Div., Armour and Co., Chicago, Ill.

Justin Schmit was appointed executive vice president in charge of operations, Chun King Associated Enterprises, Duluth, Minn.

Robert L. Eskridge was named manager of cereals advertising and promotion for the Ralston Div., Ralston Purina Co., St. Louis, Mo. Richard R. Vinyard was named manager of Purina Dog Chow advertising and promotion for the same division.

Sterling Dale was promoted to assistant frozen foods sales manager for Kitchens of Sara Lee, Inc., Chicago.

Vincent P. La Rosa, vice president of La Rosa & Sons, Inc., Brooklyn, N. Y., was appointed Mid-Western sales manager.

J. C. Gilker was appointed manager of Booth Fisheries Corp.'s fish stick plant in St. Louis, Mo. **Kenneth R. Queensen** was appointed manager of the Booth Cold Storage Co. in St. Paul, Minn., a division of Booth Fisheries.

C. S. Thompson was appointed area manager, Lower Mainland, of Canadian Canners Limited.

Brigadier General Walter A. Huntsberry, chief of the U. S. Army Oversea Supply Agency, was honored by the New York Chapter of the Quartermaster Assn. for his many contributions to the organization while serving as its honorary president.

Leon A. Miller was elected a vice president of General Foods Corp., White Plains, N. Y.

Eugene R. Weckerly was appointed sales manager for refined oil, A. E. Staley Mfg. Co., Decatur, Ill.

I. C. Slaughter, past president of the Virginia Canners Assn., has announced his candidacy for the Northumberland county board of supervisors.

R. D. McMillen

H. G. Scowcroft

Robert D. McMillen was appointed to a newly created post of public relations manager, Corn Industries Research Foundation, Inc., Washington, D. C.

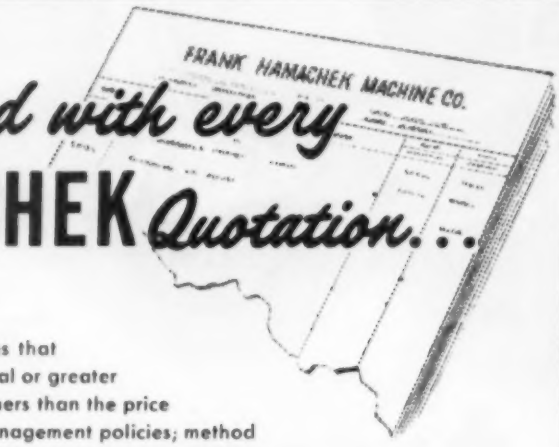
H. Gordon Scowcroft was appointed vice president in charge of marketing, United Fruit Co., New York City.

Bill Baker, Produce Terminal Cold Storage Co., Chicago, Ill., was elected president of the National Assn. of Refrigerated Warehouses.

Obituaries

Gordon T. Canning, 57, vice president in charge of promotion for the Coldwater Seafood Corp. of New York, died recently after a lengthy illness. Mr. Canning lived in Cleveland Heights, Ohio.

John N. Wright, Jr., 71, died from a heart attack while supervising work at his farm near Reliance, Md. He operated canning factories at Federalsburg, Hurlock and Hynson, Md. He was a member of the Tri-State Packers Assn. and the Old Guard Society of the National Canners Assn.



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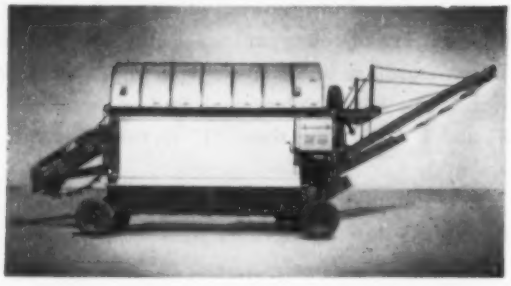

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Chippendale furniture is distinctive for its exquisite proportions. Thomas Chippendale —designer, carver, cabinet maker—had the genius to transmute into consistent unity such heterogeneous elements as lattice backs, pagoda motifs, and the cabriole leg.

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ASSOCIATION ACTIVITIES

FMA Officers Named At Annual Convention

Food Merchandisers of America, a division of the United States Wholesale Grocers Assn., elected new officers during USWGA's annual convention held in Bal Harbour, Fla.

Douglas Coulter of the Pay-Cash Grocery Co., Knoxville, Tenn., was elected president. Edward H. Russell, P. P. Williams Co., Vicksburg, Miss., was elected vice president. The duties of the officers of secretary and treasurer will be handled temporarily by staff members of USWGA.

The two officers, along with Harold O. Smith, Jr., executive vice president of USWGA, will develop plans for the further organization of the group.

Chemist Speaks on Flavor

A talk on practical flavor technology was given by Harold L. Janovsky, chief flavor chemist of Fritzsche Brothers, Inc., New York City. The talk was delivered during the 42nd annual meeting of the National Fruit and Syrup Manufacturers Assn. on Friday, April 17. Mr. Janovsky presented the basic technology of flavor rather than the chemistry of flavor. A question and answer period followed.

Tin Can Industry Will Celebrate 150th Birthday

The metal can industry is planning to celebrate the 150th anniversary of the invention of the can in 1960, according to the Can Manufacturers Institute. The official basic theme and slogan for the year will be "Metal Cans—Serving Man for 150 Years."

Roger F. Hepenstal, newly-elected president of the Institute, said that industries and companies who are principal users of cans are expected to join in the observance. He pointed out that the food processing industry buys more than 50% of all cans produced and the brewery industry uses another 20%.

Can Manufacturers Receive Commerce Award

The Can Manufacturers Institute received an award of merit at the 47th annual meeting of the Chamber of Commerce of the United States. It was announced by William A. McDonnell, president of the Chamber.

The award was presented for outstanding association achievement in the public interest in such areas as safety, education and training, career guidance, research, economic understanding and government and industrial relations.

Industry Leaders Head Refrigeration Group

The Refrigeration Research Foundation, Colorado Springs, Colo., announced the new officers of the group. Millard W. Young, National Ice and Cold Storage Co. of Calif., was named president. Mr. Young has been past president of American Warehousemen's Assn., National Assn. of Refrigerated Warehouses, and Pacific States Cold Storage Warehousemen's Assn. He was also on the executive board of the National Ice Assn.

Other prominent members of the industry who were named officers are: Franklin D. Newell, Jr., Minneapolis Cold Storage, Minneapolis, Minn.,

The new Langsenkamp "101" Can Opener is completely automatic . . . does the work of four men. Depending on the product's consistency, it can open, drain and rinse up to 20 No. 10's a minute. Positively eliminates the chance of can slivers getting into your product.

Ideal for canners, frozen food processors, bakers, or any users of liquid or semi-paste product . . . for any product that will drain through a 4" opening. Provides cleaner, more efficient handling—no loss due to spilling or splashing of product. Equipped with stainless steel underpan 60" x 20" x 15" wide, ¾ hp motor, 806 lbs. net weight, pump optional.

The "101" Automatic Can Opener is one of a complete line of Langsenkamp machines for food processors which also includes manually-operated can openers and automatic can crushers. Write for full details.

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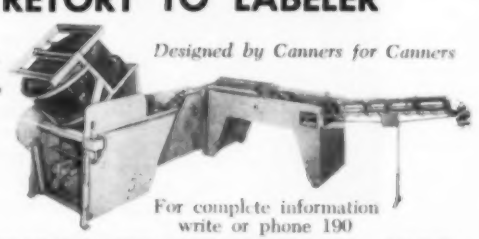

For complete information write or phone 190

SHUTTLEWORTH MACHINERY CORP.
Warren, Indiana

vice president; Gilbert J. Stecker, Merchants Ice & Cold Storage Co., Inc., Louisville, Ky., treasurer. Dr. Helmut C. Diehl, secretary and director of the Foundation, 1944-58, was elected to honorary life membership.

Convention Site Chosen For Quartermaster Convention

New York City has been selected as the site for the 1959 annual national convention of the Quartermaster Assn. The meeting will be held on Thursday and Friday, October 15 and 16, at the Hotel Statler-Hilton.

Although program details have not been finalized, the two-day session will include seminars on food processing, textiles, paper and paper products, petroleum and other subjects.

NFBA Announces Convention Plans

The National Food Brokers Association's 56th annual convention will be held in Chicago from December 12 through 16. Known as the National Food Sales Conference, the annual gathering is attended by food brokers, manufacturers, buyers and others in the industry. All of the loop hotels in Chicago again will be used to house those attending.

The NFBA convention committee has laid plans for another popular "working conference." Official committee meetings will be held before the big membership Business Session which will take place on Saturday, Dec. 12.

NFBA Committee Chairmen

NFBA Frozen Foods Committee—chairman, George J. Rivard, G. J. Rivard Co., Peoria, Ill.

NFBA Institutional and Industrial Sales Committee—chairman, H. C. Kayser, H. C. Kayser, Co., Minneapolis, Minn.

NFBA Merchandising Committee—chairman, Horace Wright, Wright Brokerage, Inc., Richmond, Va.

NFBA Canned Foods Committee—chairman, John R. Connelly, Connelly & Co., Dayton, Ohio.

NFBA Finance Committee—chairman, Clarence Wendt, Allison & Wendt, Oklahoma City, Okla.

Wholesale Grocers Elect Officers

Donald Irwin, Jr., of the L. H. Parke Co., Philadelphia, Pa., was elected president of the National Institutional Wholesale Grocers Assn. during the group's annual convention.

The following were elected vice presidents: Ferd Niehaus, Niehaus Brothers, Cincinnati, Ohio; Ora Chidester, John Sexton & Co., Chicago, Ill.; T. J. Keller, Institutional Jobbers Co., Knoxville, Tenn.; Irving Lubin, S. E. Rykoff & Co., Los Angeles, Calif.; and Edward Watson, Knoebel Mercantile Co., Denver, Colo.

Charles H. Price of George B. Vrooman, Inc., Philadelphia, Pa., was reelected treasurer.

Economist Speaks on the Nation's Economy

Dr. Karl Brandt, an agricultural economist and a member of the President's Council of Economic Advisers, gave an off-the-record talk to the NCA board members during their annual spring meeting, May 21-22.

Dr. Brandt analyzed the nation's economy from his observations as an agricultural expert and as a key member of the President's Council of Economic Advisers. The Council, which is appointed by the President and confirmed by the Senate, was established in 1946 to analyze the national economy, appraise federal economic programs and policies, and make necessary policy recommendations in the interest of economic stability and growth.

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YOU CAN REDUCE
Handling COSTS
WITH
ABC
PICKING
BOXES
that

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- STACK EVENLY
- AUTOMATIC DUMP
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ABC's vast forest, sawmill and factory facilities assure immediate service.

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FOR SALE—MACHINERY AND EQUIPMENT

Used 12 line Straight line Model SL 55 "Geyer" Heavy Duty Piston Filler for any semi-liquid or semi-solid product. Will handle cans or glass containers. Range of sizes 4 fluid oz. to 16 fluid oz. Speeds 180 to 220 containers per minute. With or without separate motor driven agitator. Reasonably priced. The Filler Machine Co., Inc., 10 Penn Avenue, Rockledge, Philadelphia 11, Pa. Phone Pilgrim 5-0170.

FOR SALE: 1—18' Factory Rebuilt Russell's Continuous Atmospheric Cooker or Cooler for No. 2's and 303's holding 2080 cans, also 1—Vance & Baker Atmospheric Cooker or Cooler holding 800 No. 2—303 cans. General Food Equipment, Inc., P. O. Box 504, Lakeland, Florida.

FOR SALE—9-cypress wood tanks 8' High x 9' Diameter.

Dave Slinger—Randolph, Wis.

FOR SALE—KETTLES, LABELERS, Retorts, Fillers, Tanks, Pumps, Can Washers, sterilizers, Case Packers, etc. Send for list. Loeb Equipment Supply Co., 830 W. Superior St., Chicago 22, Ill.

FOR SALE—1958 HUME Pea Cutter. Only cut 50 acres. Norman Brewer, RR1 Box 28, Franklin, Ind. Phone—Redfield 6-4285.

FOR SALE: 9 used 3-basket vertical retorts 42"x72" ASME code 30 PSI and 95 perforated steel baskets for above 36" x 20". Northwest Packing Co., P. O. Box 1856, Portland 11, Oregon.

WIRE FORMS: . . . Handles, Parts, Displays——— ———MADE TO YOUR SPECIFICATIONS——— Write for our file folder or Quotation to; ———FASFORM WIRE FORMING DIVISION——— 6201 Carnegie Ave., Cleveland 3, Ohio.

MODERN REBUILT PROCESS MACHINERY AVAILABLE AT GREAT SAVINGS. PROMPT DELIVERIES. Filling line consisting of 4-piston Filler, pneumatic 4-head Capper, and Pneumatic Labeler—all interconnecting conveyors.—Standard Knapp 429 Carton Sealers with Compression units.—A-B-C and Ferguson Carton Sealers.—Pneumatic Scale cartoning line, consisting of Automatic Feed, Wax Liner, Fillers, Bottom Sealer, Top Sealer and Compression Unit.—Pneumatic Scale Tite Wrap Machine.—Jones Model CMV Constant Motion Adjustable Cartoner.—Package Machinery, Hayssen, Scandia, Hudson Sharp Wrappers, all models.—Werner & Pfleiderer 3,000 gal. and 3,500 gal. Jacketed Double Arm Mixers.—Day, Baker Perkins, Hottman Mixers, all types.—Hope, Elgin, Filler Piston Fillers.—World Rotary, Ermold, Pony Labelers.—Stokes & Smith G1, G2, G4, HG87, HG88 Fillers.—Resina LC Capper.

OVER 5,000 MACHINES IN STOCK—Mixers, Labelers, Dryers, Fillers, Sifters, Grinders, Cappers, Pulverizers, Packaging Machines, Carton Sealing Machines. Write, Wire, Phone Collect for Details and Quotations. UNION STANDARD EQUIPMENT COMPANY, 318-322 Lafayette St., New York 12, N. Y. Phone CAnal 6-5334.

FOR SALE NEW: One 303 Albertoli Can Marker and One No. 10 Albertoli Can Marker. Cascade Food Products, Salem, Oregon.

FOR SALE: 1—18' Factory rebuilt Russell's Continuous Cooker for No. 2's and 303's holding 2080 cans, also 1 Vance & Baker Cooker holding 800 No. 2, 303 cans, also 1 High Speed Can Packer, single stroke, delivers 2 layers, set for 48 pack 6x4x2, handle 8-oz., #1, 12-oz. cans, good condition. General Food Equipment, Inc., P. O. Box 504, Lakeland, Florida.

FOR SALE: 2 Holland, 2-row tomato planters; 1 A.V. International tractor with cultivator, side dresser & plow. 1 International 4-row corn planter. J. A. Wiese, Rich Canning Co., Normal, Ill.

FOR SALE: Waste disposal and dewatering Screens for turning waste into profit by recovery of solids from liquid waste, dewatering vegetables, sizing and grading. Partly or totally enclosed. Special feed and discharge arrangements available. Prices of Screen only begin at $445.00. Conveyors of all kinds. The Bonded Scale and Machine Company. 12 Bellevue. Columbus 1, Ohio. Phone: Hickory 4-2186.

FOR SALE: Standard Knapp No. 429 Top Case Gluer. Fitzpatrick st. st. Comminuting Machines Models D & F. 3,000, 3,700 gallon stainless steel Vacuum Tanks with coils. Niagara Pressure Leaf Filters, 500, 100 sq. ft., Stainless Steel. SEND US YOUR INQUIRIES. PERRY EQUIPMENT CORP., 1405 N. 6th St., Phila. 22, Pa.

WANTED MACHINERY

WANTED: S. S. Steam Kettle 250 or 300 Gal. State working pressure, depth, width and size outlet. PATIO FOODS, Box 10158, San Antonio, Texas

WANTED: Several conveyors 20' to 30' long, 16" belt. Dave Slinger, Randolph, Wis.

WANTED: One six-pocket #10 M&S Piston-Type filler. Princeville Canning Co., St. Francisville, Louisiana.

WANTED: FMS Hand Packer set up to fill quart jars. Write: Bacon Products Corp., Addison, Illinois.

WANTED: CRCO No. 3 and No. 4 Pregrader or will exchange for No. 5. Box 569, c/o Canner/Packer.

HELP WANTED

WANTED—MAN TO WORK IN MODERN PICKLE PLANT located in middle west, as packing line superintendent. Must have thorough knowledge of packing equipment, White Cap Machines and high speed production. Box 339, c/o Canner/Packer.

PRODUCTION MANAGER for established modern straight line frozen shrimp processing plant in Florida. National in scope. Must be top caliber, experienced, agressive, strong on cost reduction, conscious of quality control and sanitation. Opportunity for right man to connect with fast-growing concern. Salary open. Send resume and reply to Box 169 c/o Canner/Packer.

SALES MANAGER—FROZEN FOODS. Should have national sales experience and ability to take over full sales responsibilities. Excellent opportunity for the man who can qualify. Santax Fe Berry Packer, Inc., 260 South Beverly Drive, Beverly Hills, Calif.

ASS'T. PRODUCTION MANAGER—Must be capable of assuming responsibility. Experience in food packing or processing desirable. Some engineering necessary. Pleasant working conditions with fringe benefits. Tomato products and dry pack. 3 plants. Salary commensurate with ability and experience. Reply Box 469, c/o Canner/Packer.

BUSINESS OPPORTUNITIES

WE PURCHASE raw, processed or frozen foods, discontinued mis-manufactured, dents, etc. Have institutional and foreign markets which would not disturb your present market. Berlin Co., 2900 W. Peterson, Chicago 45, Ill. RO 1-4348.

WANTED: Brokers or specialty men who are selling bakery trade, bakery supply trade, ice cream and soda fountain trade, chain and independent grocery trade, bar trade, their requirements on maraschino cherries—glaced, bottled and bulk. Write Box 369, Canner/Packer.

OTTO W. Cuyler CORPORATION

Webster, New York • Phone 270 or 370

FOOD PROCESSING MACHINERY

NEW—USED—REBUILT

FOR SALE

- (5) Lee Metal 304 S.S. 300-gallon Kettles
- (2) Pfaudler 9-valve S.S. #10 Fillers
- (1) #10 Burt Labeler, Model AUPA
- (2) Complete Cherry Lines, 5 & 9-ton per hour
- (1) #10 New-way Boxer
- (2) CRCO Model F Bean Snippers
- (2) 8 ft. Blanchers, S.S. drum
- (4) Late Model FMC Double Corn Huskers
- (12) Pressure Retorts, late model, all controls
- (77) Standard Perforated Retort Baskets
- (1) Ayars 9-pocket Tomato Filler 303 & #2, like new
- (2) Acme Silver Stitchers
- (3) Allan Applesauce Machines, 375, 280 & 150 cases per hour
- (1) Sinclair Scott Rotary Washer
- (1) FMC S.S. Pasteurizer, 30—1½" tubes
- (1) #10 Standard-Knapp Labeler
- (1) #10 Panama Closing Machine
- (1) Langsenkamp Colossal Pulper
- (1) FMC Continuous Steam Peeler
- (1) FMC Continuous Pressure Cooker #2 and 303
- (1) FMC Continuous Pressure Cooker #2½
- (3) #10 Weber Apple Fillers
- (12) Pease Double Apple Parers
- (1) FMC Continuous Abrasive Peeler

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COMPLETE DOG FOOD CANNERY. 1500 cases per day, 48 1-lb. cans, also 8-oz. Modern, efficient plant. Get complete inventory. Also write for latest catalogue of good used and rebuilt Food Packing equipment. HORNE MACHINERY CO., INC., 1188 Harrison St., San Francisco 3, Cal.

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- Recently directly "September Is Canned Foods Month" merchandising program.
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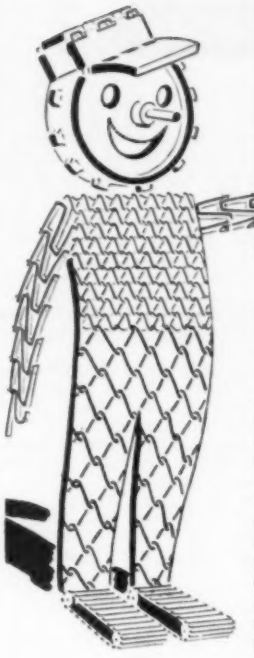
Situation wanted on West Coast. Superintendent of large midwestern meat canning plant available. Complete charge of sterile canning production in all its phases such as production costs, production quotas, wage incentive plans, labor relations, quality control, plant layout, meat and supply procurement, new product development. Intimate knowledge of government contracts. Seven years industrial engineering background, B. S. degree in business administration. Reply Box 669, c/o Canner/Packer.



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Division of USS **United States Steel**

Manufactured at Waukegan, Ill. and Oakland, Calif. • Sales Offices, Coast to Coast

Processing Technology Handbook Series

There have been 22 in a series of articles appearing in CANNER/-PACKER and in a predecessor journal. Single copies of many of the earlier articles are still available at 25c each, and a reprint of the first 14, plus No. 16, may be purchased for $1.50. Subjects covered to date include:

Article	Date
1. Water (Joslyn/Heid)	Sept., 1955
2. Steam (Joslyn/Heid)	Dec., 1955
3. Salt (Joslyn/Heid)	Feb., 1956
4. Metal Containers (Joslyn/Heid)	April, 1956
5. Crop Contracts (Gilchriste/Lane)	May 25, 1956
6. Sugar (Miller/Mattice/ Lloyd/Junk)	June, 1956
7. Ionizing Radiations (Huber/Heid)	Aug., 1956
8. Corn Sweeteners (Lewis)	Oct., 1956
9. Glass Containers (Wright)	Dec., 1956
10. Concentrating & Drying (Joslyn/Heid)	Feb., 1957
11. Electricity (Spain)	April, 1957
12. Cost Accounting (Mayhew)	May 25, 1957
13. Quality Control (Kramer)	June, 1957
14. Research & Development (Heid)	Aug., 1957
15. Enzymes (Joslyn)	Nov., 1957
16. Special Ingredients (Siemers/Rockwell)	Jan., 1958
17. Vegetable Crops (Woodroof)	Mar.-Apr., 1958
18. Flexible Packaging (Ball)	May, 1958
19. Financing (Mayman)	May 25, 1958
20. Flexible Packaging II (Ball)	July, 1958
21. Plant Safety (Westerman)	Oct.-Nov., 1958
22. Instrumentation (Roemer)	Apr.-May, 1959

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1. Eliminate wrong cook schedules.
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Cook-Chex is the chemically impregnated retort tag that changes from purple to green *only* after your run has been properly and completely retort processed. Hang a Cook-Chex on each basket before retorting—inspect it after withdrawing. You have the full "protection" record at a glance. It's that easy—that sure.

Used by *all* major packers. Approved and recommended by cannery inspectors. Ask *them!*

Send for ***Free*** *samples.*

ASEPTIC-THERMO INDICATOR CO.

Dept. CP-6, 11471 Vanowen St., No. Hollywood, Cal.

COMING EVENTS CALENDAR

June

1-3—**Pacific Seedsmen's Assn. and Idaho-Eastern Oregon Seedsmen's Assn.**, 33rd annual convention, Sun Valley, Idaho.

8-10—**Grocery Manufacturers of America**, Greenbriar Hotel, White Sulphur Springs, W. Va.

9-13—**Inter American Food Institute, Inc.**, second Inter American Food Congress, Carillon Hotel, Miami Beach, Fla.

11-13—**Iowa Food Distributors Assn.**, 12 annual spring conference, The New Inn on Lake Okoboji, Spirit Lake, Ia.

14-15—**Michigan Canners & Freezers Assn.**, spring meeting, Whitcomb Hotel, St. Joseph, Michigan.

14-17—**Processed Apples Institute, Inc.**, eighth annual meeting, Whiteface Inn, Lake Placid, N. Y.

16-17—**Maine Canners' & Freezers' Assn.**, Colony, Kennebunkport, Me.

18-20—**National Apple Institute**, annual meeting, Whiteface Inn, Lake Placid, N. Y.

21-25—**National Assn. of Retail Grocers**, annual meeting, Navy Pier, Chicago, Ill.

21-25—**Assn. of Food & Drug Officials**, 63rd annual meeting, Boston, Mass.

24-25—**National Red Cherry Institute**, spring meeting, Pantlind Hotel, Grand Rapids, Mich.

July

16-17—**National Kraut Packers Assn.**, annual summer meeting, Catawba Cliffs Beach Club, Port Clinton, Ohio.

August

3-7—**National Dietary Foods Assn.**, Hotel Olympic, Seattle, Wash.

10-12—**American Soybean Assn.**, 39th annual convention, Sheraton-Jefferson Hotel, St. Louis, Mo.

10-13—**National Food Distributors Assn.**, 32nd annual meeting, Sherman Hotel, Chicago, Ill.

13-15—**Institutional Food Distributors of America Div.**, USWGA conference and mid-year meeting, Green Briar Hotel, White Sulphur Springs, W. Va.

23-25—**1959 Internation Clover Farm**—Foodland, 33rd anniversary convention, Toronto, Ontario.

23-26—**National Assn. for the Specialty Food Trade**, 5th annual Fancy Food & Confection Show, Hotel Astor, New York City, N. Y.

September

9-10—**Pet Food Institute**, 2nd annual convention, Drake Hotel, Chicago, Ill.

October

15-16—**Quartermaster Assn.**, annual convention, Hotel Statler-Hilton, New York, N. Y.

15-17—**Florida Canners Assn.**, 28th annual convention, Hollywood Beach Hotel, Hollywood, Fla.

21-23—**National Agricultural Chemicals Assn.**, 26th annual meeting, French Lick-Sheraton Hotel, French Lick, Ind.

25-28—**National Frozen Food Distributors Assn.**, merchandising exposition, Sherman Hotel, Chicago, Ill.

29-30—**National Pickle Packers Assn.**, annual meeting, Drake Hotel, Chicago, Ill.

November

5—**Illinois Canners Assn.**, fall meeting, LaSalle Hotel, Chicago, Ill.

17-20—**Packaging Machinery Manufacturers Institute, Inc.**, "PMMI Show of 1959," New York Coliseum.

23-24—**Michigan Canners' and Freezers' Assn.**, fall meeting, Pantlind Hotel, Grand Rapids, Mich.

December

7-8—**Tri-State Packers Assn.**, annual meeting, Haddon Hall, Atlantic City, N. J.

9-11—**Grocery Manufacturers of America**, Waldorf Astoria, New York, N. Y.

12-16—**National Food Brokers Assn.**, National Food Sales Conference, Chicago, Ill.

Merchandising Calendar

July 1-31: Natl. Iced Tea Time (Tea Council, 500 5th Ave., New York 36, N. Y.).

July 1-31: Natl. Picnic Month (Am. Bakers Assn., 20 No. Wacker Dr., Chicago, Ill.).

July 1-31: Natl. Hot Dog Month (Natl. Hot Dog Month Council, 3520 So. Morgan Ave., Chicago 9, Ill.).

July 4: Independence Day (Presidential proclamation).

Aug. 1-Sept. 30: Back To School Month.

Sept. 1-30: Natl. Better Breakfast Month.

Sept. 7: Labor Day.

Sept. 20-26: Natl. Dog Week.

Oct. 1-31: Natl. Rice Harvest Festival (Rice Consumer Serv., Realty Bldg., Louisville 2, Ky.).

Oct. 1-31: October Cheese Festival (Amer. Dairy Assn., 20 N. Wacker Dr., Chicago 6, Ill.).

Oct. 12: Columbus Day.

Oct. 15-24: Natl. Macaroni Week (Natl. Macaroni Inst., 139 N. Ashland Ave., Palatine, Ill.).

Oct. 15-24: Natl. Apple Week (Natl. Apple Week Assn., 1302-18th St., N. W., Washington 6, D. C.).

Oct. 17: Sweetest Day.

Oct. 17-25: Natl. Donut Week.

Oct. 19-25: Natl. Fish and Seafood Week (Natl. Fisheries Inst., 1614-20th St., N. W., Washington 9, D. C.).

Oct. 25-31: Natl. Honey Week (Amer. Honey Inst., 114 N. Carroll St., Madison 3, Wis.).

Oct. 31: Hallowe'en.

Nov. 1-7: International Cat. Week.

Nov. 2-8: Natl. Horseradish Week.

Nov. 3: General Election Week.

Nov. 11: Veterans Day.

Nov. 13-21: Save-A-Wife Week.

Nov. 14: Sadie Hawkins Day.

Nov. 15-21: Diabetes Week.

Nov. 26: Thanksgiving Day.

I.F.T. Sections Calendar of Meeting Dates

Eastern

Rochester: June 8-13, June 15-20, and June 22-23, courses on Statistical Quality Control and Design of Experiments for the Chemical Industries, at the Rochester Institute of Technology, Rochester, N. Y.

Massachusetts: June 22-26, symposium on "Food Protection Factors in Modern Food Technology," sponsored by the Dept. of Food Technology, Massachusetts Institute of Technology with the U.S. Food and Drug Administration, Cambridge, Mass.

Midwest

Chicago: Sept. 26, a tour of the Dept. of Dairy and Food Industries, University of Wis., Madison; attendance at Wisconsin-Stanford football game is being arranged.

Western

Nor. Calif.: June 6, annual picnic, Blackberry Farm, Monte Vista, beginning at 12 noon.

So. Calif.: June 17, field trip.

So. Calif.: Sept. 16, joint meeting with AACC.

So. Calif.: Oct. 23, all day meeting, Miramar Hotel, Santa Monica, Calif.

Southern

Mexico: First Tuesday of each month. For time and place phone Walter E. McAllister, Mexico City 11-90-00.

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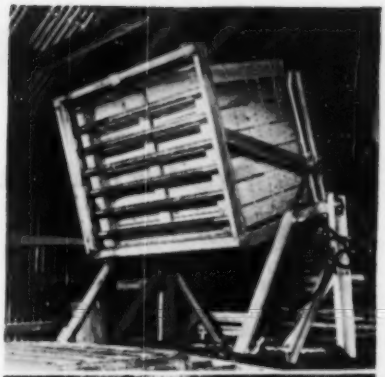
Spectacular Savings from Field to House

Wirebound bulk boxes and smaller James Crates save money, equipment, labor



Canners and fresh packers report saving 50% on initial container cost, replacing 14 men with only 2, increasing production, and saving up to 49% in storage space using wirebound pallet crates. Available in sizes to hold 17 to 40 bushels of fruits and vegetables weighing 500 to 2,000 lbs.

Others find rectangular 4/5 bu., 1 bu. and 1¼ bu. James Field Crates serviceable for 6 seasons, cost 40% less than other type containers, and stack 20 high in storage.

For more details and illustrated literature on both types of wirebound containers, write

Have you seen the 18-minute color-sound movie "Bulk Handling Apples in Pallet Crates"? Showings arranged on request.

PACKAGE RESEARCH LABORATORY, Rockaway, New Jersey

Raw Product Managers—Key to Quality Food Products

Raw products executives will find, elsewhere in this issue, a report on the possible establishment of an institute for men in their line of work.

This department will not attempt to comment on the merits of such a suggestion. If an institute is needed, it will come, and meanwhile the raw products committees of national and regional canning and packing associations are performing excellent service.

But I do want to talk with you about the increasing importance of the canned, dry, frozen and glassed food firms' field departments. Their value should be recognized fully, and they should be given adequate authority to carry out their duties.

Control Over Half the Acreage

Figures recently compiled by Canner/Packer show that 7,350,000 acres of U.S. farmland are currently being devoted to the production of fruit, vegetable and nut crops for the packing of canned, dry, frozen and glassed foods. This tremendous acreage includes

1,540,000 acres of fruits and berries
1,800,000 acres of tree and ground nuts
1,615,000 acres of beans-peas-garbanzos
395,000 acres of white potatoes
2,000,000 acres of processing vegetables

This farmland adds up to 70% of all the nation's fruit and nut acreage, and about 55% of all the acres devoted to vegetable crops.

In addition, undetermined but large acreage is devoted to cereal crops for processing.

Still further, this processing acreage is increasing, while that for the fresh market is declining. Fruit-nut acreage as a whole dropped from 6.8 million to 4.8 million acres in the past quarter-century, but that for processing has gained 17%. Total vegetable acreage has declined from 8.6 million to 7.3 million acres since the early 1930's, but acreage for processing has gone up a phenomenal 43%.

Job Becomes More Scientific

In addition to being concerned with more and more acreage, raw product officials find their work becoming increasingly technical.

There is an increasing use of plant foods, as irrigation practices change, soils become depleted, marginal lands go into production, new plant nutrient techniques are developed. Thus field department men must understand soil analysis, and use of chemicals for such purposes as stimulation of plant growth, control of ripening times, protection against inclement weather.

A constant parade of insecticides, fungicides and herbicides is being introduced. The raw product man must keep up with all such developments if he is to achieve maximum success in defending his crops against insects, diseases and weed growth. At the same time, he must know what sort of residues these chemicals leave on his crops, and how U.S., state and local food and drug or health officials feel about tolerances for such residues.

New Harvesting Practices Are Coming

He must keep familiar with the new machinery developed for soil preparation, seed planting, crop cultivation, spraying and dusting, and for harvesting. Major developments are especially in the news these days in connection with mechanical harvesting, which not only concern machines for the purpose, but also varieties suited to such handling, and planting and cultural practices.

He must work with growers in providing farm labor, especially during the harvest period. This not only necessitates knowledge of crop conditions, but also of personnel recruitment and handling practices, and even of international relations.

And he must keep a watchful eye on many other agricultural developments. Will this new variety of green bean supplant types he is currently growing? Can he use some acid with an unspellable name to stimulate his cucumbers-for-pickles? Will a hormone spray hold his peaches on the tree without damaging quality factors? What's new in seed inoculants, protectants, etc., that would boost his yield-per-acre of peas? Should he go to bulk bins for his lima beans, or to a new lug box for his tomatoes?

Adequate Authority Is a Must

Yet despite the growing acreage he must supervise, and the increasing complexity of his work, the field department manager often finds himself lacking the stature he needs to do everything his job calls for.

When he feels one insecticide should be used, or one variety of vegetable grown, and his grower prefers another, does the raw product manager prevail? Usually, but not always.

When he wishes to adopt one handling procedure and production likes another, or they fail to agree on maturity standards, harvesting dates, etc., is there company machinery by which an answer suitable to both sides can be evolved? Certainly not in every case.

When he'd like to experiment with a new machine, a new chemical, a new variety, does management give him an adequate budget for such work, and a means for mutual selection of worthwhile projects? Not in every firm.

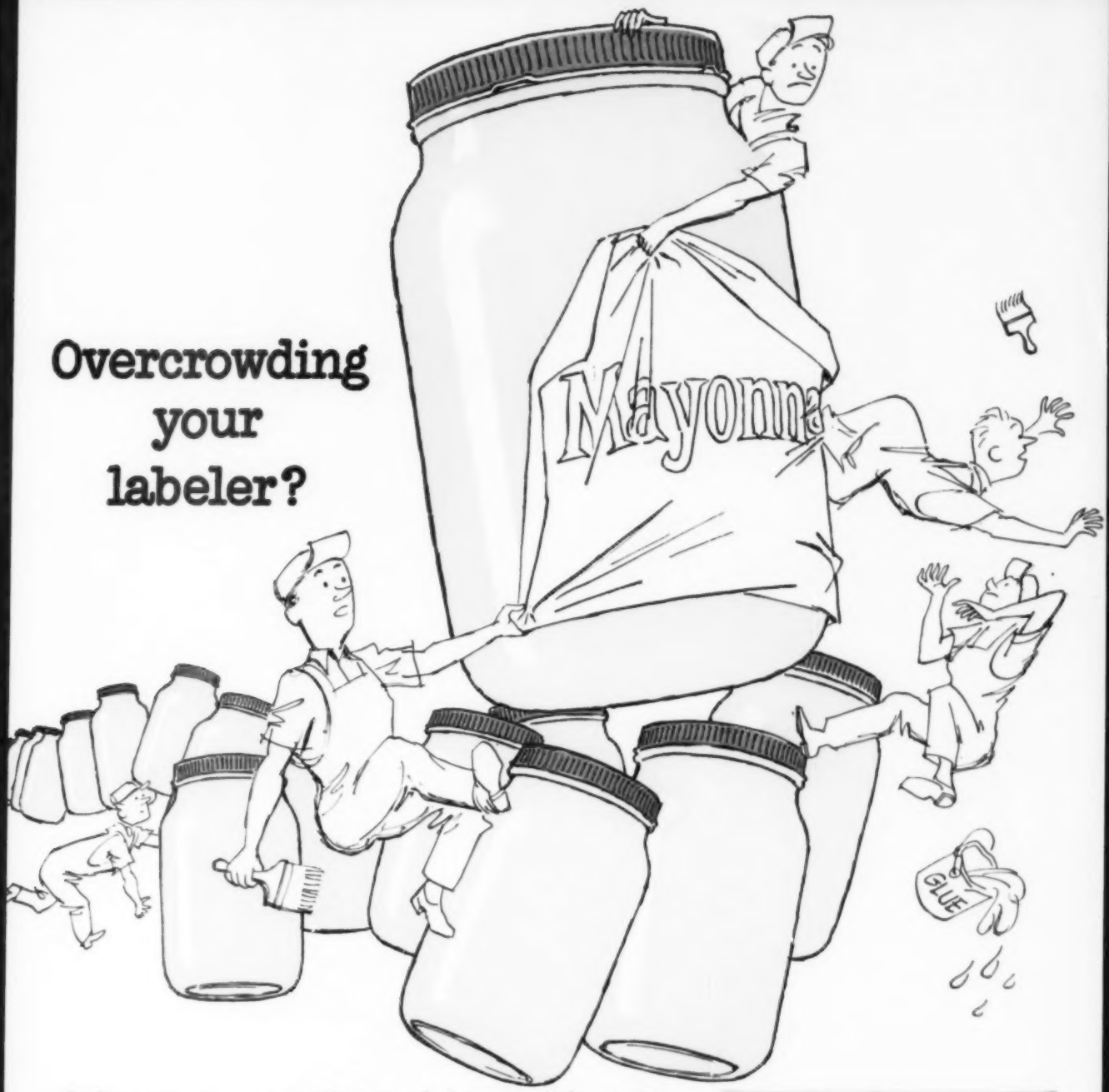
Management Should Take a Look

This is a time, then, when management in every processed food company should take a look at the raw products department's job, to make sure that it is being well-done in the first place, and that its personnel have the authority to do what is needed.

Only when the top field man is a full member of the management team can canners and packers be assured of optimum-quality raw materials. And, as has so often been said, your finished packs can never be better than the raw products from which they are made.

El Stark
Editor

Overcrowding your labeler?



Perhaps you are . . . or perhaps you feel you can "*always* run another shift." Ever think of what that "catching up" costs? It's a hefty price to pay for something you can have in the first place.

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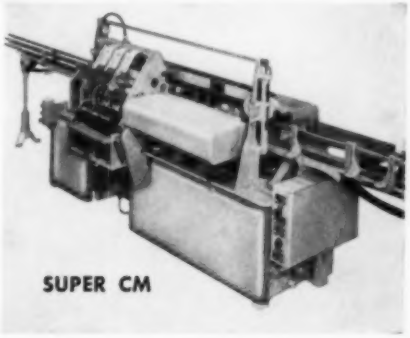
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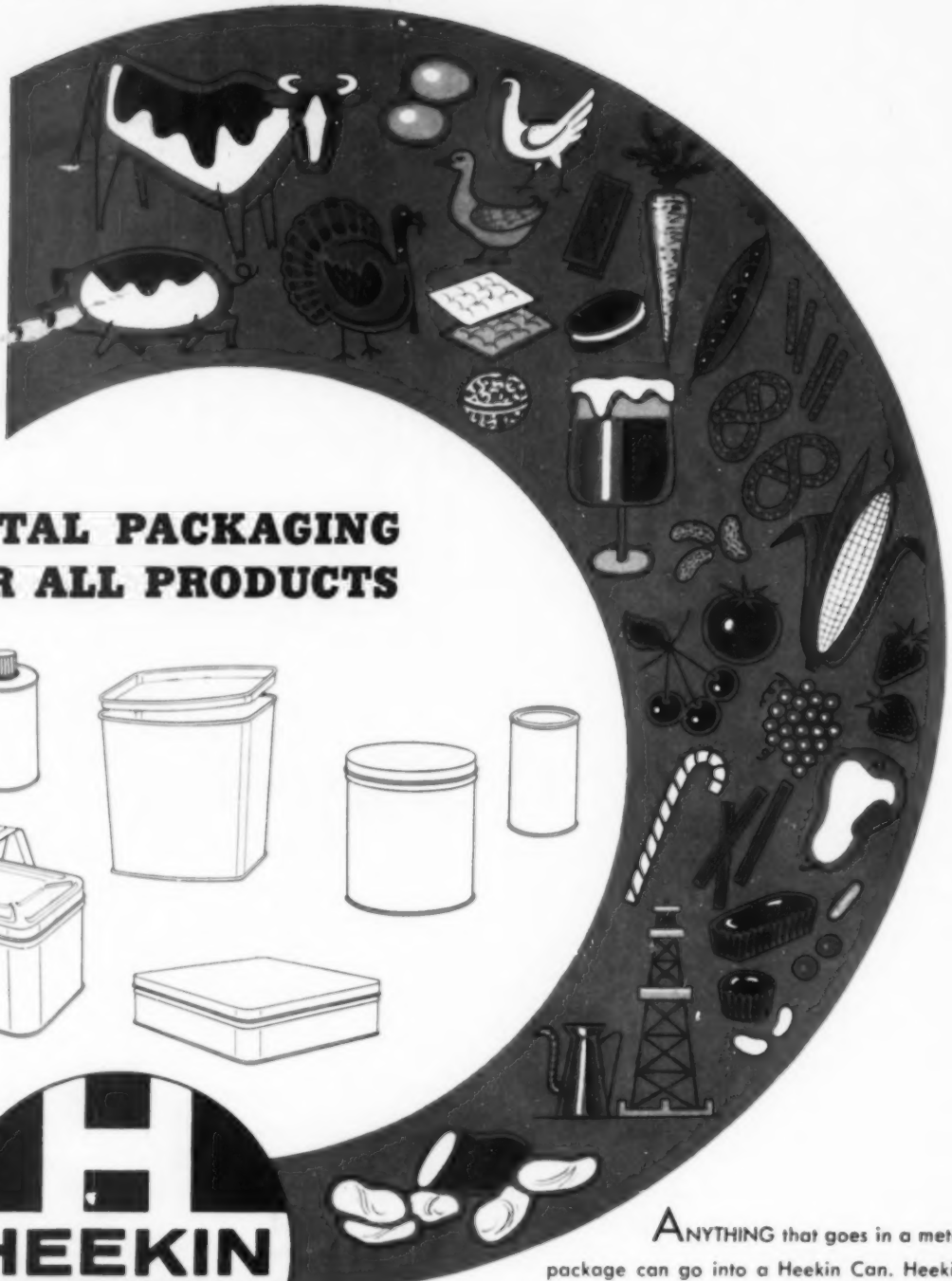

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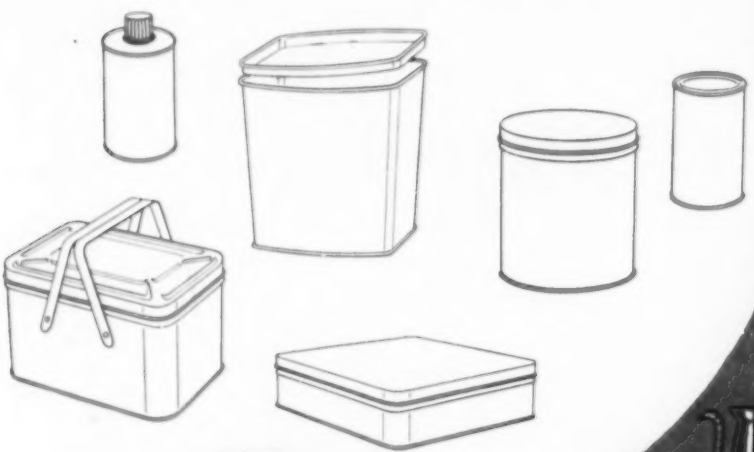

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